

# American Perfumer

## AND AROMATICS



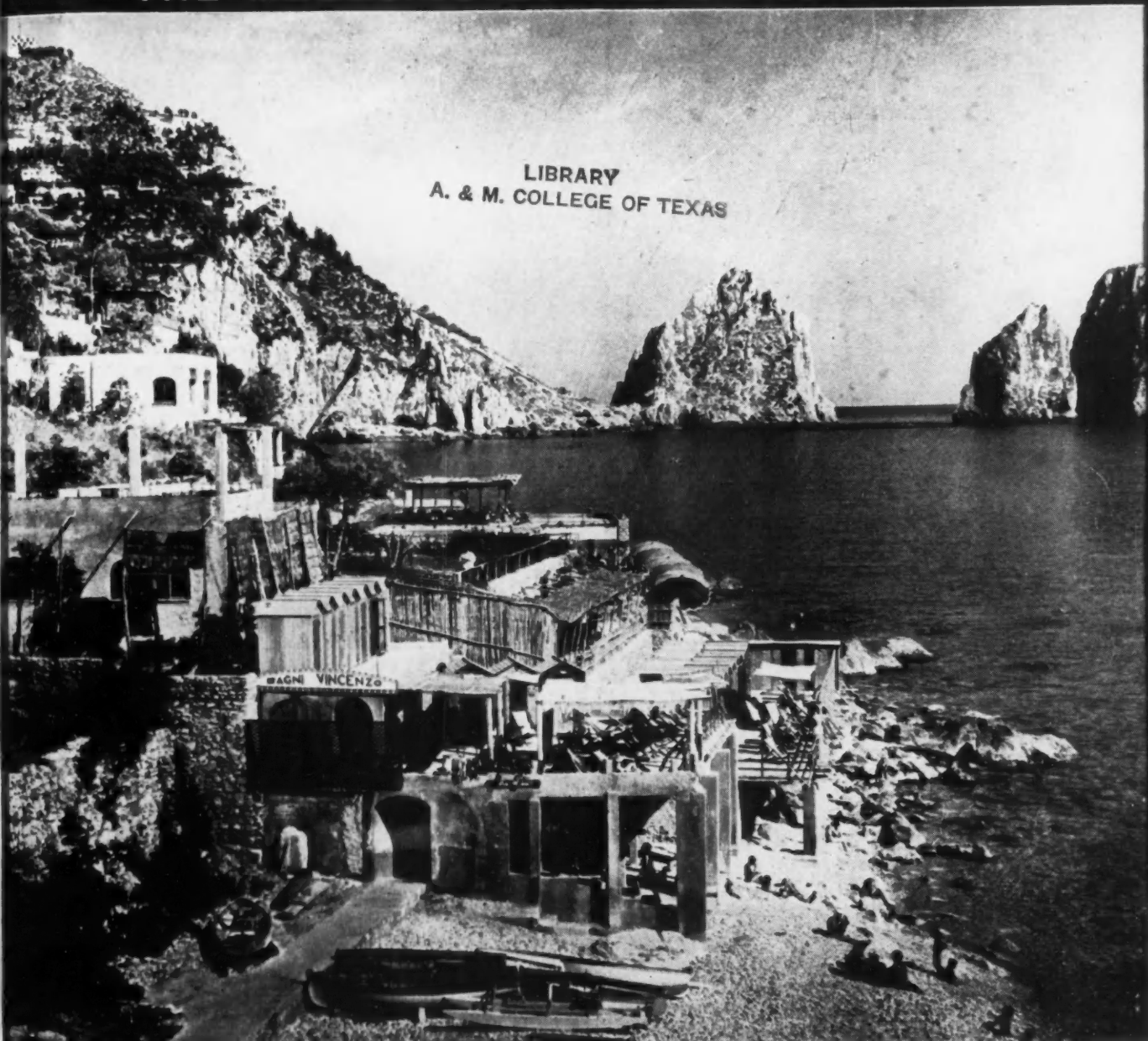
COSMETICS  
TOILETRIES  
SOAPS

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PHARMACEUTICALS  
FOODS  
FLAVORING  
& ADDITIVES

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In Two Sections  
SECTION 1

JANUARY 1956

THE MAGAZINE OF TASTE AND SCENT



Royal Jelly in Cosmetics . . . Page 31 • Battle of the Noses . . . Page 68



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# contents:

## RESEARCH

- Relation of Odor and Flavor ..... Victor G. Fourman, Ph.D. 25  
*New data correlating both*  
 New Analytical Techniques ..... Charles L. Teitelbaum, Ph.D. 28  
*Uses for Essential Oil and Flavor research*

## PRODUCTION

- Another View of Hand Cream ..... H. C. Janowitz 30  
*An angle overlooked*  
 Use of Royal Jelly in Cosmetics ..... R. B. Willson 31  
*Probable value as cosmetic ingredient*

## FLAVOR SECTION

- Raspberry Flavor Formulation ..... Morris B. Jacobs, Ph.D. 49  
*Suggestions for obtaining a satisfactory flavor*  
 How Glycerine Enhances Flavors ..... Robert Stetson 58  
*Uses in vanilla flavors*

## SOAP SECTION

- Re-Using Scrap Soap ..... Paul I. Smith 76  
*Converting it into marketable form*  
 Pine Oil for Household Soaps ..... 76

## MANAGEMENT

- S. C. C. Honors Its Founder ..... 34  
*Medal Award and Summary of proceedings*  
 T. G. A. Scientists Hold Record Meeting ..... 42  
*Welcome by John Ewald . . . Dr. Dan Dahle conductor*  
 Perfumers in Profile ..... F. V. Wells 40  
*Sketches of French perfumers*  
 Old 97 Co.—An American Success Story ..... Fred Moore 47  
*A thriving company grew from an idea*

## DEPARTMENTS

- Editorial ..... 14  
 Desiderata ..... 21  
 Questions and Answers ..... 23  
 "I Quiz" ..... 66  
 Battle of the Noses ..... 68  
 Packaging and Promotion ..... 70  
 New Products and Ideas ..... 74  
 News ..... 9, 84  
 Technical Abstracts ..... 100  
 Market Report ..... 103  
 Index to Advertisers ..... 106



COVER: Capri . . . Marina Piccola (Small Harbor) and the Faraglioni Courtesy of Italian State Tourist Office

VOL. 67, NO. 1

JAN. 1956

# American Perfumer AND AROMATICS

NBP

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 M. G. DE NAVARRE Technical Editor  
 M. B. JACOBS Flavor Editor  
 WM. LAMBERT Editor

FRED D. MOORE Assistant Editor  
 A. vander SHAW Art Director  
 JOHN H. MULLER Advertising Manager  
 MARILYN PIANO Advertising Production Mgr.

E. C. JOHNSON Circulation Manager  
 M. RÖDNER Promotion Manager

CHICAGO  
 868 Peoples Gas Building, 122 South Michigan Avenue, Chicago 3, Illinois

LOS ANGELES  
 McDonald-Thompson, Charles D. Eidson, 3727 W. Sixth Street, Los Angeles 5, Calif. Dunkirk 7-5391

SAN FRANCISCO  
 McDonald-Thompson, 625 Market Street, San Francisco 5, Calif. Yukon 6-0647

EDITORIAL AND EXECUTIVE OFFICES  
 48 W. 38th St., New York 18, N.Y. Longacre 5-3320

Cable Address: Robinpub. N. Y. Volume 67, Number 1. (Copyright 1956, Moore Publishing Co., Inc.)

PUBLISHED MONTHLY by Moore Publishing Company, Inc. Publication office: Emmett St., Bristol, Conn., U.S.A. Editorial and Executive Offices: 48 W. 38th St., New York 18, N.Y. J. H. Moore, Chairman of the Board; J. H. Moore, Jr., President; Lucian Neff, Vice President; G. R. Brennan, Secretary. Subscription Rates: U.S.A. and Possessions and Canada, \$4.00 one year; 50 cents per copy. Foreign, \$10.00 one year.

Entered as second class matter, January 12, 1950, at the Post Office at Bristol, Conn., under act of March 3, 1879. Moore Publishing Co., Inc., is publisher also of Advertising Agency Magazine, American Printer & Lithographer, Gas Age, Gas Appliance Merchandising, Industrial Gas, LP-Gas and Brown's Directory of American Gas Companies.

281981

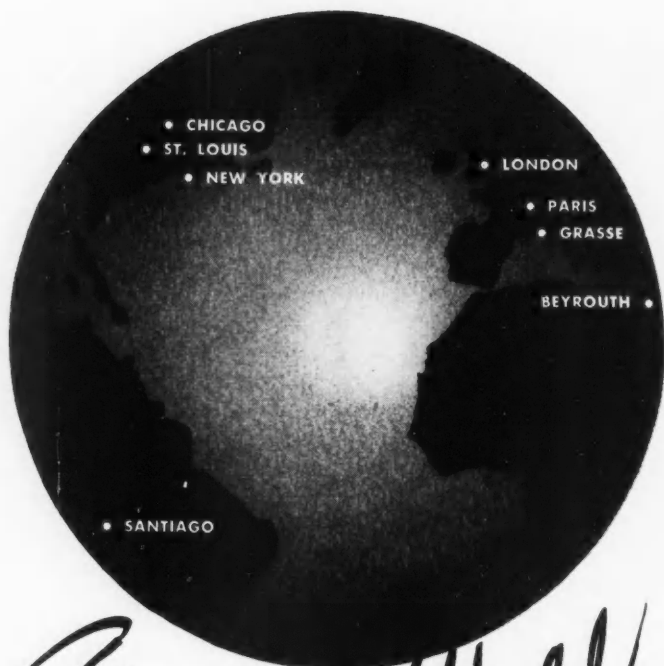
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## LATE MINUTE NEWS . . .

### Compromise Additives in Foods Measure Being Circulated

A bill to compromise the differences in legislation for controlling the use of additives in foods is being circulated. It provides that those proposing to incorporate new additives in foods must make application to the Dept. of Health, Education and Welfare and file scientific evidence that the additive is safe for its intended purpose.

### Max Factor & Co. Merges Sales Builders into Parent Company

Max Factor & Co. has merged Sales Builders Inc., its former sales and distributing organization, into the parent company as the Max Factor United States sales division. Maurice R. Chez is vice president of the new division and Kenneth Caldwell is now vice president in charge of the company's U. S. advertising. The new million dollar offices and laboratories of Max Factor & Co. will be ready for occupancy within a few weeks.

### Scientists Join Kolar Laboratories in Research Capacities

Kolmar Laboratories announces the appointment of Otto Jacobi, Ph. D. as director of research and William F. Buth, B. S. as director of chemical research, following the resignation of Dr. Herbert Heinrich. Dr. Jacobi will direct his attention to skin physiology, animal pharmacology, chemical analysis, formulation and essential oils. Mr. Buth will be in complete charge of research in organic and inorganic synthesis and Wickhen production, a chemical affiliate. Both will collaborate in the handling of customer and supplier contacts.

### Production and Sales of Aerosols Mounting

A nation wide survey just completed by E. I. duPont de Nemours & Co. on the use of aerosols showed that 52 per cent of the families interviewed used room deodorants

and hair sprays in aerosols. Other products packed in aerosols with the percentage of use were: Shaving cream, 27 per cent; Brush lather shaving cream, 28 per cent; Hair dressings, anti-perspirants perfumes and colognes, 18 per cent; hair shampoos, 4 per cent; hand lotions, 14 per cent; suntan lotions, 8 per cent; burn sprays, 3 per cent; and athletes foot remedies, 2 per cent. An estimated 185 million aerosol units with a retail value of nearly \$200,000,000 were turned out this year.

### Food Additives Control Bill Introduced in Congress

Rep. Percy Priest has introduced in Congress the compromise new bill for controlling the use of additives in foods. Hearings will be scheduled on food additives legislation in the near future.

### Scotch, Rye and Bourbon New Tooth Paste Ingredients

Poynter Products Inc., Cincinnati, Ohio, has been organized to manufacture tooth paste with whisky as an ingredient. The experiment of adding whisky to toothpaste proved so successful that a company was formed by Don Poynter to manufacture the popular flavored dentifrice. A tube retails for \$1.50.

### Metal Tube Shipments Reach New High

Collapsible metal tube shipments for a single month reached an all-time high of 100,568,304 units in November, reports the Collapsible Tube Manufacturers Council.

Shipments of toothpaste tubes for the month were the largest on record, with 58,514,688 units. Pharmaceuticals accounted for 17,368,416 units and cosmetics for 6,489,216.

### Representatives of Albert Verley & Co. Hold General Sales Meeting in New Jersey Early This Month



Seated, left to right: B. Zimmer, Jr.; C. A. Senger; J. E. Strobl; H. E. Dunning; H. J. Edmon. Standing, left to right: E. Baumann; C. F. Morgan; J. Safran; R. C. Hodapp; J. H. R. Stephenson; R. M. Barber; N. C. Neustrup; A. Hendriksen; R. F. Weidgenant; J. J. Ploczek; R. Greuter; R. G. Strobl; W. Eckert; J. L. Isaacs.

Two days of sales and technical discussions marked the meeting of sales representatives from New York, Chicago, Toronto and foreign

departments of Albert Verley & Co. in the plants in Linden and Newark, N. J. and at the Elizabeth-Carteret Hotel in Elizabeth, January 4-6.

## Essential Oil Sales Outlook Good Gampert Reports

"Essential Oil prices will probably remain around present levels or possibly fractionally lower, volume of sales will be good and competition will be exceedingly keen in 1956" Louis Gampert, president of the Essential Oil Assn. of the U. S. A. stated in his report at the annual meeting of the association January 6. "The export outlook is favorable due to increasing prosperity abroad and further relinquishing of restrictions in foreign countries. Managements will be challenged to maintain the prosperity of their companies in the light of ever increasing costs of conducting a business," he added and then reviewed the situation of the more commonly used oils. "Generally essential oil prices were lower in 1955 than they were in 1954. The epidemic of poor quality Patchouli oil even from established shippers," he pointed out, "is now pretty well cleared up but raises the question as to whether The Essential Oil Assn. should not attempt to evolve a program which will place greater responsibility for performance on shippers and their brokers." Due to illness Mr. Gampert was not present and his paper was read by Pierre Coutin, vice president, who conducted the meeting in his absence.

Newly elected officers of the association are: President, Pierre Coutin, Ph. Chaley Inc.; Vice President, Gert Keller, Schimmel & Co.; Secretary-Treasurer, Frank Dittrich, Ungerer & Co. Executive committee: Louis Gampert, Felton Chemical Co.; R. E. Horsey, Givaudan-Delawanna Inc.; Michael Lemmermeyer, Aromatic Products, Inc.; Robert A. Engel, Trubek Laboratories; and Frederick J. Lueders, George Lueders & Co.

Following the report by Val H. Fisher, tribute of the entire group was paid to the memory of members who had died during the past year. They were: Ferdinand J. Beyer, Sylvain Fontanes, William Hale, Arthur Lindy, William Schilling Jr. and Herman G. Weicker.

Chairman Dr. A. E. Fiore read the report of the Scientific Committee. He reported that 13 new essential oil and aromatic chemical monographs were adopted. These were presented at the scientific meeting in the afternoon by: Dr. A. S. Dubenchik, Rue Oil; Dr. H. Daggett, Oil of Cubebe; Dr. T. Bonica, Oil Angelica Root and Oil Angelica Seed; Dr. A. Warren, Yellow Camphor Oil (960-980); Dr. G.

Hedstrom, White Camphor Oil (860-880); Dr. George Branigan, Oil of Mandarin and Oil of Tangerine; Dr. R. Lewers, Oil Limes Expressed; and the following aromatic chemicals: Dr. K. T. Keller, C-9; Dr. L. Hediger, Nonalactone and Benzyl Salicylate; and Dr. E. G. Fearn, Hydratropic Aldehyde.

The proposed revisions and standard formats were directed by Dr. E. C. Fearn, aromatic chemicals; Dr. E. Langenau, essential oils; and Dr. E. T. Theimer, infrared studies.

In view of pending legislation on chemical additives in food the association created a sub committee of the Executive Committee to study the matter and present its findings to the members. Chairman Van Lies was commended for the fine work done in preparing a supplementary listing of new names by the Trade Mark Committee. Chairman Adolph Dingfelder of the Export Committee was also commended and thanked for the work of his committee notably for inducing the government of Colombia to completely modify its original drastically strict import regulations. Also, he was commended for a brief providing the essential oil exports background to West Germany, the Netherlands, the United Kingdom and France on a rate-value basis which was directed to the North Atlantic conference on the subject of reducing steamship rates. Relief was obtained from the conference by the committee.

Reports were read by Waldo Reis of the Membership committee, by Frank Dittrich, chairman of the Import Committee, by Robert Engel, chairman of the Aromatics committee, and by Gert Keller on chemical additives. Mr. Keller reported briefly on the three points of view expressed in bills for a law which seems certain to be enacted on chemical additives.

Tribute was paid by the retiring president and by several of the speakers to the efficient service rendered during the past year by Ray Schlotterer director of the executive office of the association.

Following the meeting the annual banquet was held. Professional entertainment which appealed strongly to the members concluded the festivities.

## News Notes from Here and There Affecting the Industry

The sixth western Packaging and Materials Handling Exposition

will be held July 10, 11 and 12 at the Los Angeles, Calif. Pan Pacific Auditorium.

The ninth annual Drug, Cosmetic and Sundry Show will be held at the Hotel Statler, New York, September 23, 24, and 25. The show will be managed by Connolly & Leopold, Room 697, Hotel McAlpin, New York.

Actual interviews to show why consumers buy will be demonstrated by closed circuit television at the annual marketing conference of the American Management Assn. in the Hotel Statler, New York, February 6-8. In this way the techniques and uses of motivation research as a tool in marketing will be explained and shown on a theatre size screen in the grand ball room.

The Drug, Cosmetic & Chemical Institute has undertaken three research projects according to Dr. Louis C. Barail, executive director, who outlined them at the December 14 meeting. The projects concern Chemotherapy of Epitheliones; Loss of Efficiency of Buffered Aspirin Tablets; and Formulation of Effective, Rapid and Harmless Anti-Perspirants.

The value of the 1955 crop of peppermint and spearmint exceeded 1954 by \$2,057,000 according to the crop reporting board of the Department of Agriculture.

John N. Curlett, former president of the Flavoring Extract Manufacturers Assn. has been elected president of McCormick & Co., Baltimore Md. He succeeds Charles P. McCormick who is now chairman of the board.

Liquid Carbonic Corp., Chicago, Ill. has bought the Standard Vanilla Co. of Los Angeles, and will operate it as a division.

"The Use of the Psychiatrist in the Chemical Industry" was the subject of an address by Dr. Walter D. Woodward at the January 10 meeting of the Synthetic Organic Chemical Manufacturers Assn.

The third annual Chemical Credit Men's Conference will be held at the Warwick Hotel, Philadelphia February 22-24. The conference is sponsored by the Drug, Cosmetic & Chemical Credit Men's Assn. and the National Chemical Credit Assn.









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# Editorials...

## **The Past and the Future . . .**

One of the most inspiring passages in all literature occurs in the Iliad of Homer when the noble Hector raising his little son in his arms expresses the wish that is uppermost in hearts of all right thinking fathers: "May this boy become greater than his father." In something of the same spirit the Moore Publishing Co. offers this, the first issue of AMERICAN PERFUMER & AROMATICS as the successor to the old American Perfumer & Essential Oil Review which for half a century served the closely allied cosmetic, soap, flavor, essential oil and aromatic chemical industries. New in dress and fresh in viewpoint but constant in its ideals, the AMERICAN PERFUMER & AROMATICS will strive to serve more completely as times change and methods improve, the growing needs of its readers for timely, vital, relevant and useful information.

## **Cosmetic Taxes . . .**

In view of the fact that this is an election year it is probable that taxes will be cut. Opinion in Washington now on the possibility of a reduction in cosmetic excise taxes is not reassuring. While it is probable that Congress will enact legislation on excise taxes on tobacco, liquor and automobiles by April 1 because an automatic reduction on them is due to take place then, the general feeling seems to be that emphasis in so far as tax reduction is concerned will be placed on individual income taxes, not only because it is good politics but also because it would tend to stimulate consumer buying.

## **Fair Trade After 24 Years . . .**

Fair trade has been in effect for 24 years. At the beginning of this year fair trade laws were in effect in 40 states having 80% of the population of the United States. In the legislatures fair trade's record of never having been repealed by any legislature was maintained despite a recommendation for repeal of the federal enabling statutes, the Miller-Tydings and McGuire acts made by the Attorney General's national committee to study anti-trust laws. Repeal bills were defeated in Massachusetts, Pennsylvania and Delaware. The federal courts in 1955 threw back a number of challenges to fair trade's constitutionality. The United States Supreme Court left intact its own favorable decision of 1936 by refusing for the eighth time to review favorable decisions of other courts. At the end of the year the score in high state courts stood 17 to 5 for constitutionality. The fair trade debate will continue throughout this year in the legislatures, the

courts and the marketplace. No new fair trade legislation, nor any repeal bill is anticipated. And friends of fair trade are hopeful that current studies of the marketplace by Congressional committees will bring the whole resale price maintenance picture into better perspective.

## **Door to Door Selling . . .**

There are about 3,000 companies which sell their products from door to door in the United States. They do an estimated annual business of around one billion dollars. Due largely to the fact that more people are moving to the suburbs and also to the parking problem in shopping centers of the cities, this method of selling—of "bringing the store to the customer"—is expanding. Concerns which hitherto have sold exclusively through retail channels or by mail order are gradually adding the door-to-door method of selling to their regular distribution channels. For example, Sears Roebuck is employing a sales force to demonstrate and sell products in the home; salesmen for the Ford Motor Co. in Toledo go from door to door to find prospects and to sell cars to them; and it is reported that 70% of the carpeting sold by Hudson's in Detroit is now sold in the home. In view of such developments it is reasonable to suppose that an increasing number of retailers will give more attention to direct house to house selling. At the Toilet Goods Assn. convention last May Arthur Fatt pointed out that house to house salesmen enable department stores to render a more complete service. The method does relieve the consumer of shopping hurry. House to house salesmen, particularly in the cosmetic field, do help to create increased demands for toilet preparations. With all types of industries and even retailers entering the field evils can readily creep in. As long as direct selling conforms to the principles of fair dealing the method will serve a useful purpose. If not, and this is the concern of the more responsible companies, municipalities are likely to enact restrictions which may be very burdensome.

## **Honor to Pioneers . . .**

The small group of pioneers who organized the Society of Cosmetic Chemists built better than they knew. Today it is recognized universally for its outstanding service. It was fitting that on the tenth anniversary an honorary membership was conferred on the founder and that scrolls were presented to the charter members: Philip Adams, James Baker, Robert E. Casely, M. G. deNavarre, Emery A. Emerson, Emanuel G. Gundlach, Stephen A. Karas, Emil G. Klarmann, Marcel J. Suter, Walter A. Taylor and Cloyce L. Thomas.



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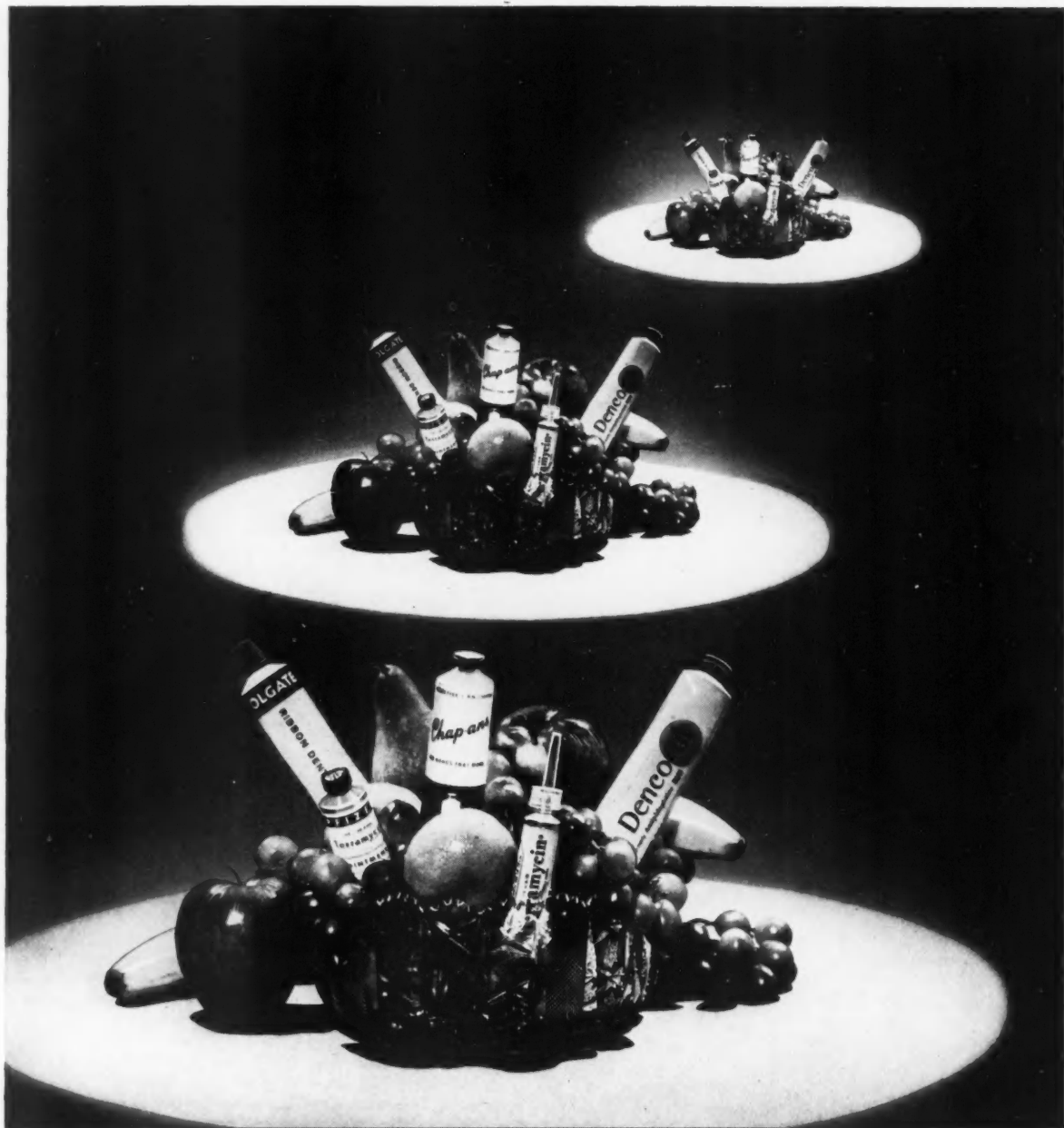
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## Getting Suppliers Data

Recently I had the need for checking various trade named specialties. To be sure that the products of the main suppliers, world-wide, had been checked, a form letter went to a couple hundred companies, requesting a list of their trade named cosmetic specialties if any, the qualitative composition and end use. Letters to all European and other companies outside of the U. S. were air mailed. The response was interesting.

Within six days from the date of mailing, the first reply came from England, quickly followed by data from Germany, then some U. S. replies and finally France and Italy in that order.

This does not mean that all companies in these countries replied. Indeed, replies are still forthcoming from almost 25% of the companies, and it is now over sixty days since the request went out.

An unpleasant characteristic of some German replies was that the company did not export to the U. S., and hence sent no data. Yet nothing was said in my letter about buying anything. Only information was requested. One large German company has replied twice, advising that a comprehensive listing was being compiled and would be air mailed. One British and one German companies would supply nothing and wanted to know why the data was requested even though the purpose was given in the original letter. Many companies, including the

U. S., sent incomplete lists. Some hedged about qualitative disclosures but had forgotten they had supplied this data a few years ago.

Poorest suppliers of data are the large cartel type organizations with either present or former international affiliation. One such company gave 7 items. I already have a dozen or more of their products listed. Wonder if all the divisions know what the company offers.

Most U. S. companies took two weeks to reply and/or send data. Some supplied data on products other than requested. One company sent pound samples of each specialty even though no samples were requested. One company replied that they had no cosmetic specialties. We found a couple of their items listed. We asked about them. The supplier properly identified them as useful cosmetic materials.

The form in which the data has been received is a study in itself. Some was supplied as printed matter; other as mimeographed or multiprinted sheets; some were single sheet carbons with no company name on them; some called attention to new products about to be released but not mentioned in formal listing. A few sent long elaborate titles, listing and describing the items. A few sent dog-eared pamphlets although they contained the wanted data.

When thinking about business one can readily find many answers in a form request of this type. Some companies are anxious to cooperate. Some will cooperate eventually. A few want you to think

they are cooperating by giving very little. Some of the "big boys" throw you a few crumbs, which should satisfy you. And an amazing number are just too busy to reply to letters.

## The New Year

Have kept the shop open at this stand for about twenty years. During that time I've had some kicks (some kinda dirty and below the belt), some disagreements, a few compliments, but most of all, many letters from readers. They are the ones who patronize this spot and make it possible to be here, year in and year out.


So to you all, customers of my "store," may the good Lord look kindly on you and yours in the new year. May your health be the best. And if all this is so, then the *dinero* will take care of itself.

I'd like to say thanks too, to the scores of friends who have sent Holiday greetings from the four corners of the earth. These are heartily reciprocated.

## Notes


The Society of Cosmetic Chemists and the Scientific Section of the T. G. A. have both just held their December meetings—the week before it was the C. S. M. A. and the Canadian Toilet Goods Manufacturers Association—It is a rough two weeks—but a lot of good stuff is tossed around at these meetings and it doesn't all take place inside the meeting hall. . . . For example, a highlight to me took place at the

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T. G. M. A. meeting in Toronto when a Mr. F. A. Walton privately gave his formula for determining the sales potential of any given area—and he ought to know for when a fellow rakes up fantastic business increases based on his formula, then it must be pretty good. . . . I liked the symposium on dandruff at the S. C. C. meeting, but feel that the problem is far from being solved because of the multiplicity of causes, not all agreed upon. . . . There is a fancy job for a cosmetic chemists, Ph.D. preferred, paying up to \$30,000 per year—job calls for a research manager under forty-five years of age. . . . *Tide* came up with something that all direct selling companies have known for years, namely, that 62 per cent of distribution costs were due to shipping—in fact, their panel made a lot of other interesting observations you should read about, one of which is that it is almost impossible to economize on shipping. . . . General Mills describe and illustrate an interesting olfactometer in the current issue of their house organ. . . . Mentioning *Tide* magazine, there is an article in the December 17, 1955 issue by market researchers of Street and Smith publications regarding "stage of life" rather than age as a basis for determining need for goods or services. . . . Chlorophyll and bioflavonoids are two cases where the FDA was on a limb—way out on it—and isn't back yet—To get away with a new drug, just pick on one that is on the ragged edge and get a number of other manufacturers to join with you—your proof can be pretty flimsy—antienzymes are not too far from this ragged edge either. . . . I am wondering if Fair Trade has a "basic economic philosophy" and I am all for the druggist, since my training is in pharmacy—Carl Weeks felt pretty strongly on the subject twenty-five or more years ago and for sticking up for the rights of the "corner druggist," what a beating he took, personally, and Armand too—I hope he is vindicated. . . . The new miracle dandricide, N-trichloromethylmercapto-4-cyclohexane-1,-2, dicarboximide, has a lot of problems connected with it—wonder if the one big promoter ran into solubility, perfume changes and possible hydrolysis? . . . Glad to see Morrie Root so active in aerosol technology. . . . If you have reached the age of sixty years, you are of the "neutral gender" according to Masters reporting to the meeting of the American Academy of Obstetrics and Gynecology.

# Q UESTIONS & A NSWERS

## 1175: Hair Wax

**Q.** What formula could you suggest for a so-called "Crew Hair Cut Wax," intended to make the hair stand up. Is there a "plastic" material useful in this way? Would silicones work out for this purpose? H.B.D., Illinois.

**A.** Crew cut hair wax is simply made by hardening an oil with enough wax to give the desired consistency. This is usually one-third wax and two-thirds oil. The oil of choice might be mineral oil. Wax should probably be a blend of beeswax or paraffin or related hydrocarbon for best molding purposes. We know of no plastic material that might be used for this purpose. Silicones might work but would add little to the merit of the product and would increase the cost considerably.

## 1176: Product Perfume

**Q.** Can you advise me as to what would be the best type of perfume to use in a product consisting of 2/3 cosmetic lanolin and 1/3 oleic acid, white? P.A.I., New York.

**A.** We would suggest a neroly type of compound for perfuming a product consisting of lanolin and oleic acid. However, why don't you ask some of the perfume suppliers who advertise in THE AMERICAN PERFUMER to submit samples of a compound for use in a product with a high lanolin content.

## 1177: Antioxidants and Emulsifiers

**Q.** What would you suggest as a good emulsifier and antioxidant for emulsions of orange oil in water? In what proportion would these two products be used? The emulsion is made for a beverage. B.H.F., Holland.

**A.** Regarding antioxidants and emulsifiers in flavored emulsions, the galates and NDGA have been recommended for the purpose. In some cases BHA can be used. As to emulsifiers for orange oil, the traditional ones, of course, are vegetable gums. Some of the newer emulsifiers for the Span, Tween and Crill type should be useful but taste of course becomes a problem. These materials are available from England or Germany.

## 1178: Cold Wave Formula

**Q.** I am anxious to get a most recent formula for a cold wave which contains a self-neutralizer. I would appreciate it if you could advise as to a good cosmetic formulary book, and if I could obtain it through your office. The formula I am after is for normal hair, hard to wave, easy to wave, bleached and dyed hair. B.M.B., Washington.

**A.** Any self-neutralizing cold wave lotion known to us is patented. You will, therefore, have to use a separate neutralizer. We suggest that you contact either Evans Chemetics, Inc., or Kolar Laboratories, Inc., to compound for you a cold waving lotion of the type you want. The active ingredients in these lotions is usually ammonia thioglycolate, which is supplied by Halby Products Co., Summit Chemical Products Corp., or Evans Chemetics, Inc. This substance is very susceptible to deterioration by poor handling, and unless you have special all-glass, all-rubber or all-stainless steel equipment from end to end, you should not attempt to mix and package these products. Therefore, we suggest that you contact a private label supply house able to do this for you.

In answer to question number 1166 regarding silicones in the November issue of THE AMERICAN PERFUMER, it was erroneously stated that the address of General Electric Co. was Mechanicville, N. Y. The correct address is Waterford, N. Y.

## AMERICAN AROMATICS

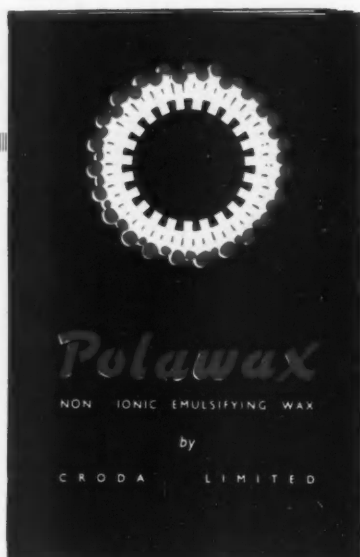
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## THE RELATION OF

# Odor AND Flavor



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VICTOR G. FOURMAN, Ph. D.\*

### The Sense of Smell is a Factor in Judging Taste

### Chemical Senses Can Aid in Producing Satisfaction

The number of raw materials employed in the manufacture of perfume oils is very large and this list is increasing year by year as new aromatics and essential oils are being investigated with the thought of their possible use in the fragrance field. There appears to be almost no limit to the types and kinds of ingredients available for the creation of new odors and new variations. From the viewpoint of number of ingredients, the field of perfume is more complex than that of flavor as the materials employed to create flavors, both old and new, are relatively restricted. Perfumes are not meant for internal consumption but flavors are taken into the human system and thus limitations are imposed upon them by federal regulation. In another sense, however, the field of flavors is the more complicated. Once problems such as absence of discoloration, stability, and suitability have been taken into account, only fragrance remains to be considered. In flavor work aroma as well

as taste must be dealt with so that two senses instead of one are brought into play.

### Closely Related Senses

All competent authorities agree that the senses of taste and smell are closely related; they are part of the chemical sense system because in each case the stimuli are specific chemical substances. Most often the two senses are so interlocked that there appears to be excitation of only one single sense. However, this is not always the case. When sugar or salt is tasted, to cite but two instances, the odor factor does not exist. It would require too much strain on the imagination to assume that all substances which have taste are odoriferous but that in

\*President, Syntomatic Corporation

some, such as sugar, the odor factor is not sufficiently active to stimulate the olfactory nerve endings. A less cumbersome view is to conclude that in *most* but not all instances taste is accompanied by smell.

When showing the relation between the two senses, a favorite method of writers on the subject is to cite the inability of individuals to recognize flavors once the sense of smell becomes inactive for one reason or another. This co-function, as it may be called, however, explains little. According to Jacobs<sup>4</sup> taste perception and taste are highly complex reactions resembling in their variability the marked differences shown by individuals in odor and flavor perception and response.

In his chapter on "Taste and Smell," Pfaffmann<sup>10</sup> reminds us that of the three classes of sensory cells only those of the common chemical sense and olfaction are primarily neutral elements while the sense cells of taste are modified epithelial cells. Some of the relations of all three chemical senses can be explained in terms of anatomy. "The fact that the chemical sense organs are grouped together at the entrance of the respiratory and alimentary tracts of air-inhibiting animals means that these senses are frequently stimulated in combination," states Pfaffmann. The relation between the so-called common chemical sense and true olfaction is well known. There are two classes of receptors in the nasal passages: the nerve endings of the olfactory cleft and the trigeminal nerve endings, which are the non-olfactory factors of smell. It is these endings which are stimulated by such strong odors as those of ammonia, acetic acid and other harsh smelling chemicals. In fact, when a very strong or harsh odor is perceived, the subject is faced with something more than olfaction. The differences between mild odors and strong ones are so marked that the strong odors must be regarded as different stimuli not only in degree but in kind.

In various studies on odor and taste there has been much neglect with reference to the concentration of the smell or taste stimulus. This phase of the subject is of such importance that in a symposium on chemoreception held at Johns Hopkins University (1951) under the auspices of the Office of Naval Research, the question of standardizing procedures for preparing solutions of taste-testing substances was discussed. Methods employed for measuring concentrations in odor studies are even less uniform and more complicated than those used in flavors. Obviously, it is an easier task to prepare a standardized solution of a flavor by introducing, for example, 0.2 cc of the flavor into enough of the solvent to have a total volume of one liter than it is to disperse two volumes of a perfume oil in ten thousand volumes of air.

#### Excitation of Taste Sense More Complex

While taste is generally assumed to be a simple sense because there are supposed to be only four fundamental tastes compared with an almost endless number of odor variations, the excitation of the taste sense is actually more complex than that of olfaction. We are confronted with three chemical senses rather than with one—namely those of taste, mouth-feel, as well as odor. According to Moncrieff<sup>7</sup>, the innervation of the taste sense is more complex because at least three of the cranial nerves are concerned, but with the sense of smell there is only the olfactory nerve, the first cranial nerve, which conveys all the messages to the brain.

The human body contains more than twenty different kinds of receptors. Attempts to classify them in any definite manner present many difficult problems. A classifica-

cation proposed by Parker<sup>8</sup> is based on the kind of force exciting the various receptors. Those excited by suitable concentration of definite substances in solution are designated as *chemoreceptors*. These in turn are subdivided into three different types: olfactory, gustatory or taste buds, common chemoreceptors. The common chemoreceptors are related to the common chemical sense which is sensitive to mild irritating solutions found on moist mucous membrane surfaces such as the eyeball, the nasal and the mouth cavities. The receptors having to do with smell are highly specialized cells of the epithelium in the mucous lining of the nose. The portion of the membrane containing the olfactory receptors is very small. Since the value of flavors also depends on their aroma, all the industries associated with flavors as well as the fragrance and cosmetic industries depend on what takes place on a membrane about one square inch in area. The extreme delicacy of the sense of smell is well known; the sense of taste is, as a rule, not as keen. Many investigations have been carried out to determine the least detectable quantity of odorous substances. It has been estimated that one of the mercaptans can be detected when the amount present is  $2.17 \times 10^{-9}$  mg. This is about one five hundred billionth of a gram.\*

#### Taste Buds

Some investigators maintain that there exist at least four types of receptors called taste buds, others point out that even the four generally accepted ones have not been differentiated histologically. The taste buds are composed of receptor cells and the axones have deep seated cell bodies. In olfaction the neurons have cell bodies in the receptive area and their axones extend as nerve fibres into the brain. The number of sensations are not exhausted by relating them to the five sensory organs: nose, tongue, eyes, ears, and skin. In addition to the responses associated with these organs, pressure, temperature, pain, and many other experiences are registered which are also sensations. To consider that there are only five sensations is, in the light of modern research, as dated as the belief that there are only four types of taste.

To the perfumer the term "organoleptic" means only one thing: the evaluation of an odor in terms of an expert's nose; to the flavorist it means the evaluation of a flavor in terms of an expert's taste. Actually, organoleptic has to do with anything which affects an organ or organs, especially of taste, touch or smell—hence a question involving mouth-feel of a food or the coolness of a beverage is as much an organoleptic factor as odor or taste. A difference between odor and taste which is obvious yet sometimes overlooked is the manner in which they first come in contact with the specific sensory organ. Only those substances can be tasted which are soluble, and the mucous membrane of the mouth must be moist. Even colloids, not being true solutions, are tasteless. In the case of odors, they must be in a gaseous form to be perceptible.

Sagarin<sup>11</sup> shows the relation between odor and flavor from the historical and economic points of view. "From time immemorial," he says, "the science of flavor has been inextricably linked with the blending of odors. . . . Just where a border line between the senses of taste and smell can be found is a matter of debate." He shows how the perfume and flavor industries, although their aims and methods differ in many respects, have much in

\* This ultra-microscopic amount is mentioned a number of times in various texts but as the volume of air is not specifically stated, we assume the space to be an average room.

common. In a recent article in this journal, Bedoukian and Wotherspoon<sup>1</sup> mention the importance of the oxygenated substances, such as esters, carbonyl compounds, alcohol, esters, and lactones, that contribute to the aroma and often to the taste of the various compositions into which they enter. No generally accepted theory has as yet been offered to explain conclusively the relationship between structural configuration and odor, nor between structural configuration and taste. However, the fact that oxygenated compounds are most desirable, as a rule, for both flavor and odor value while most hydrocarbons are not, is significant. Bedoukian and Wotherspoon state that the hydrocarbons are relatively devoid of odor and flavor. Were this the case, they would do little more than act as solvents, merely lowering the concentration of the highly valuable oxygenated compounds. Many of the hydrocarbons, especially members of the unsaturated series, do impart odors and tastes which are often sharp, unpleasant, and undesirable.

A comparison of the chapters on "The Chemical Senses" in the 1954 revised edition of *Experimental Psychology* by Woodworth and Schlosberg,<sup>12</sup> and the original edition<sup>13</sup> published sixteen years earlier, demonstrates clearly the progress made in this field, although much remains to be investigated and more to be explained. Receptors for all three chemical senses, true taste, smell, and common sensitivity, are located in the intercommunicating cavity of the mouth and nose. Therefore it is one of the chief reasons why there is so much difficulty encountered in studying the physiology of the chemical senses.\*

#### Interrelation of Senses

To illustrate to what extent these senses are interrelated, Woodworth and Schlosberg list the following components as being stimulated, for example, by a mouthful of a carbonated orange drink, to show that taste sensation is far from a simple reaction:

|                         |   |
|-------------------------|---|
| Taste:                  | sour, sweet   |
| Temperature:            | cold  |
| Common, chemical sense: | a mild sting, or tingle, as in all carbonated beverages                                 |
| Touch and kinesthesia:  | a rather complex pattern of pressures due to the physical characteristics of the liquid |
| Smell:                  | a complex but characteristic quality which can be described as fruity or fragrant       |

They also point out that common chemical sensitivity, and even taste, enter into many things we loosely call odors. They are obliged to admit that our gustatory and olfactory chemistry is a subject which is still in many respects not far advanced at most points.

Research in progress is concerned with the study of the receptor and central nervous system processes of taste. "The basic nature of the very process of taste stimulation is yet to be discovered," says Pfaffmann.<sup>9</sup> This can also be said of odor stimulation. Lauffer<sup>5</sup> presented several years ago a scholarly review of the various modern theories of olfaction. It is most interesting that Faraday noted about a century ago that many odorous materials strongly absorb radiation in the infrared region of the spectrum. The infrared theory of olfactory stimulation has been restated a number of times with various modifications. The peculiarities of

the infrared absorption and Raman shift in odorous compounds suggest that some property connected with molecular oscillation is concerned in olfaction. Although the theories of olfaction are far from completely satisfactory, those concerning theories of gustatory function are even less definite.

#### Reaction Time Experiments

Reaction time experiments were invented by the great physiologist Helmholtz over a century ago. Since then a great number of such measurements have been carried out for various stimuli on many subjects. Those for sight, hearing and touch yield more accurate results than those for taste or smell because in the latter cases, it is almost impossible to apply stimuli without also stimulating some touch receptors. Kiesow in 1903 measured the reaction time for taste stimuli by applying solution to the tongue with a small brush mounted on a suitable circuit key. The results were as follows:

| Stimulus                             | Reaction Time<br>(in milliseconds) |
|--------------------------------------|------------------------------------|
| Salt: sodium chloride, saturated     | 308                                |
| Sweet: cane sugar, nearly saturated  | 448                                |
| Sour: citric acid, dilute            | 536                                |
| Bitter: quinine bisulfate, saturated | 1082                               |

Smell stimuli were applied to two subjects by Moldenhauer in 1883 by a special device. The average for both was 300.

There is much more known about the senses of vision and of hearing than there is about the chemical senses. Lauffer, in pointing out how little is known about the chemical make-up of olfactory cells, states that in a standard text book of physiology over eighty pages are devoted to vision while only seven pages to olfaction. However, more investigators each year are extending the frontiers in the fields of chemistry, psychology and physiology of odor and taste. The scientific literature in each of these divisions is impressive but there remains much to be discovered about each of the separate chemical senses before a clear pattern can be achieved concerning their relationships to one another. Unlike the areas of vision and hearing, those of taste and smell offer up to the present time no opportunities for a mathematical treatment of any types of waves that might possibly interpret some of the mysteries still existing when we smell something pleasant or taste something good.

We are indebted to the publishers, Henry Holt and Co., and to the authors for the material adopted from Woodworth and Schlosberg's *Experimental Psychology*; also to Mrs. Joan Greeley of Syntomatic Corporation for her valuable help in the preparation of this paper.

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\* In a volume published by the Yale University Press this year, "Receptors and Sensory Perception," which is a discussion of aims, means and results of electrophysiological research into the process of reception by Ragnar Granit, director of the Nobel Institute for Neurophysiology in Stockholm, unfortunately, there is practically no material on olfaction and taste as most of this work is concerned with audition and vision.



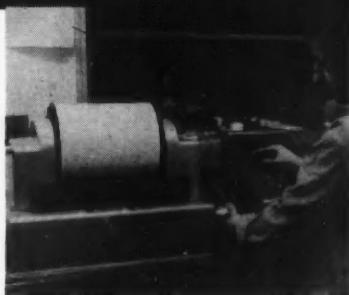
# NEW ANALYTICAL TECHNIQUES

## for ESSENTIAL OIL & FLAVOR RESEARCH



CHARLES L. TEITELBAUM,  
Ph. D.\*

*Distillation Being Carried Out*



*Determination of the Infrared  
Spectrum of a Sample*

The purpose of this article is to review some of the new techniques for the isolation and identification of natural-product components, and to indicate briefly their potential value to the types of problems mentioned above. Some laboratories, very notably those of the U. S. Department of Agriculture, have used many of these techniques with considerable success, especially in work on fruit flavors. In the Battelle laboratories, we have used and been convinced of the value of several of them in our current work on essential oils.

Decades of work by some of the world's finest chemists on most of the common essential oils have revealed most of the major and some of the minor or trace components. Yet among the latter, especially, there is undeniably a large gap to be filled. Probably, one cannot expect to identify unequivocally *all* the constituents of such complex materials, and it may be that some of the trace constituents are not of great importance. However, there are still many unidentified constituents of important essential oils, present in concentrations of perhaps 0.1 to 10 per cent, which are of great significance to the over-all properties of the oils, and which might be bases for improved analysis and control techniques. In the field of flavoring materials the gaps in our knowledge are much wider, and, there-

fore, probably even more is to be gained by research on major as well as minor components of these materials.

### SEPARATION TECHNIQUES

The efficiency of new distillation equipment is such that one "modern" fractional distillation may be the equivalent in separating power of as many as 150 simple distillations. Even in cases where low pressures must be used, where small quantities are available, or where contact with metals is undesirable, very high efficiency and the resulting sharp separations are possible.<sup>1</sup> Distillation is used so widely in investigations of essential oils that it is not necessary to give specific examples of its use. Almost any work in this field will use distillation as one step in the separation scheme.

### Chromatography

Selective adsorption or chromatography<sup>2</sup> is another technique which has been known for some time but whose potentialities have only recently been realized. The usual process is to adsorb the sample on a column of active solid and then elute with one or a series of solvents. In general, the hydrocarbons are eluted first, followed by the oxygenated compounds in order of increasing polarity. Not only are excellent separations possible in this way, but the range of usefulness extends

\*Principal Chemist, Chemical Research, Battelle Memorial Institute, Columbus, Ohio

from sample sizes of below one hundred milligrams (one tenth of a gram) to production quantities. Kirchner and Miller<sup>3</sup> have demonstrated the use of chromatography for the preparation of terpeneless essential oils on a commercial scale. At Battelle, chromatographic methods have been developed using a series of solvents of varying elution power and giving excellent separations even on small samples of quite volatile materials. The "chromatostrip" method<sup>4</sup> is another procedure of considerable promise for routine analysis as well as research. For this technique and its further development, the "chromatoplate,"<sup>5</sup> thin layers of silica gel adsorbent are used as coatings on glass. With very small amounts of material, it is possible to characterize rapidly an essential oil. Thus, one can readily distinguish spearmint oils from different species of plants by their individualistic chromatographic patterns.<sup>5</sup> Since this technique is rapid, simple, and convenient, it seems to offer great promise for the routine identification of essential oils and flavoring materials, and the detection of adulterants.

#### Liquid-Liquid Extraction

Liquid-liquid extraction, which involves distribution of a material between two immiscible solvents, is a third technique which has been known for some time. Craig<sup>6</sup> has made remarkable advances with this method and has an ingenious apparatus for multi-stage, counter-current distribution which has achieved startling results with several different kinds of natural-product separations. Use has been made of this technique in research on fruit flavors, and with the choice of the proper solvent systems there is no reason why this method should not find an important place in work with essential oils.

Partition chromatography combines features of solvent distribution and ordinary adsorption chromatography, and has had considerable success particularly in amino acid separations. Its most spectacular facet has been the development of paper-partition chromatography, but column-partition chromatography has also found an important role. Paper-partition chromatography is capable of handling extremely small quantities but suffers from the limitation of not being applicable to materials of any considerable volatility. The development of suitable nonaqueous solvent systems, as has been investigated in several laboratories including our own should extend the usefulness of this method for essential oils and flavoring materials.

#### Gas-phase Chromatography

The type of chromatography undergoing the most rapid development at the present is gas-phase chromatography.<sup>7</sup> In short, this method involves the passage of a gaseous mixture through a column of adsorbent and the examination and collection of the effluent gases. A very common variation is the replacement of a solid adsorbent by a solid wetted with a liquid of low volatility, the so-called gas-liquid partition chromatography. For theoretical reasons which we cannot go into here, sharper chromatographic separations are possible in a gas phase than in a liquid phase. However, the gas-phase procedures suffer from several disadvantages. First, only small amounts of material can be handled with high efficiency. Second, the technique is not applicable to compounds with boiling points much above 300° C. Third, compounds to be separated must be stable at whatever temperature is required to make the highest boiling component of the mixture sufficiently volatile. In spite of these limitations, gas-phase chromatography will probably find considerable use because of its simplicity and high efficiency. In particular, the

use of elution patterns may be very valuable for routine identification work.

A relatively new technique which seems to have definite potential for essential-oil and flavor research is based on the use of "clathrate" compounds<sup>8</sup>. The formation of these compounds depends on the sizes and shapes of the molecules involved. For instance, urea forms complexes only with straight-chain, aliphatic compounds or those compounds which contain fairly long straight chains. These complexes can be readily separated from the inert compounds, and then the complexed substances can be regenerated very simply. On the other hand, thiourea generally complexes preferentially with the nonstraight-chain compounds; its use is complementary to that of urea, and to that of nickel-ammonia complex which preferentially forms complexes with aromatic compounds. Enough work has been done at Battelle to indicate that at least the urea-complex method has considerable promise for essential oil work.

#### IDENTIFICATION TECHNIQUES

Among the identification techniques, to be distinguished from the above separation techniques, infrared spectroscopy is probably the most prominent. The use of infrared spectra for identification and purity determination of perfumery and flavoring materials has previously been discussed<sup>9</sup>, but its great utility for identification of isolated compounds cannot be realized, however, without the development of a large library of reference spectra. Some of these references are now available from laboratories specializing in publishing infrared spectra, and others are available in the chemical literature. To supplement these, we have determined the infrared spectra of a large number of commercially available essential-oil components, as well as of research samples very kindly sent to us by a number of research workers in this country and abroad. By the use of suitable methods of machine indexing of reference spectral data, one can readily identify a substance isolated from its natural source provided its reference spectrum is in the file. The number of these reference spectra is already very considerable and is continually growing. While it is not intended to imply that the classical methods of identification are outmoded, there are some distinct advantages of infrared analysis; liquid or solid samples of less than one milligram can be readily handled; in most cases relatively impure samples can be identified; the analysis is quite rapid; and, considerable structural information can be obtained even if the substance has not previously been identified. These attributes, coupled with its nondestructive nature make infrared analysis a very useful tool.

Of course, the classical methods for identification of single compounds are still of great importance. These include the preparation and study of derivatives, and/or the determination of such physical properties as melting point, boiling point, refractive index, density, and optical rotation, and comparison of the data with those for authentic compounds. For work with essential oils, however, it is somewhat hazardous to depend on these methods alone. Except under unusual circumstances, a compound must be very pure before the results of its physical-property measurements are reliable. Although satisfactory derivatives frequently can be prepared from relatively impure compounds, considerable prior effort may be required to determine even which kind of derivative might be suitable (infrared analysis can be of great help in this connection). Further, suitable derivatives cannot be prepared from many compounds, such as hydrocarbons and ethers. In addition, many series of compounds cannot be readily distinguished by means of

derivatives. Thus, it would be very difficult to distinguish methyl benzoate from ethyl benzoate since the usual derivatives contain solely the common acid grouping.

Speaking generally, the surest methods for identifying an unknown are by showing the identity of its infrared spectra with that of a known compound, and by demonstration of identical separate and mixed melting points of the same kind of derivative of the two samples. Of these, the infrared method is obviously the most widely applicable.

In addition to the classical methods and infrared analysis, there are other techniques which prove helpful in special cases. Mass spectra are particularly valuable for identification and analysis of mixtures of homologous straight-chain compounds, and ultraviolet spectra are of use in analyzing aromatic compounds. There are several relatively recent developments in the fields of physics and physical chemistry which should be watched in the next few years for their potential value to essential oil and flavor research. Among these are microwave spectra, Raman spectra, fluorescence analysis, and nuclear magnetic resonance spectra.

#### APPLICATIONS

The use of the above separation and identification techniques in a carefully planned manner is capable of giving excellent results. Each of the separation methods previously mentioned depends upon different properties of the substances of interest and, by proper combination of methods, some remarkable separations are possible. For example, by distillation one can separate the components of an essential oil into groups based on their boiling points. Each one of these groups can then be broken down into subgroups on the basis of types of chemical reactivity. Chromatography of the subgroups, perhaps followed by urea complex separation of the chromatography fractions, is the last step in one of the many possible separation schemes and, incidentally, one which we have found to be of great value. Obviously, one usually starts with the technique requiring the largest quantities of material and progresses to those which are capable of handling small amounts.

Such schemes are capable of giving an inordinate number of fractions to be analyzed. However, we have found that by correlation of organoleptic testing with an understanding of the separation processes involved, and with reasonable care, the number of infrared spectra required can be kept within reason. Furthermore, infrared spectra can be extremely useful in following the separation processes, since many general types of compound have characteristic infrared absorption bands and the completeness of certain separations can be easily checked. In general, we feel that such an approach can, in many instances, give better results with less work than can more conventional methods, particularly for the elucidation of the minor constituents of a material.

#### Summary

By combinations of the separation and identification methods described above with odor- and taste-panel techniques as described by Sjostrom,<sup>10</sup> tools are now available to the research chemist that many open up new vistas in the essential oil and flavoring material fields. The chemist may be long way from preparing completely satisfactory synthetic substitutes for most essential oils and flavors but, with the new tools that are available, certainly there are many materials being used today on which further research is warranted. Further, some of these new tools could be especially valuable for quality control purposes.

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## HAND CREAM FROM ANOTHER POINT OF VIEW

Herbert C. Janowitz

A lot has been written about the manufacture of hand creams and lotions. But most of the formulas are for a superfatted stearate soap with addition of glycerin, sorbitol or other humectants which collectively vanish into the hands.

Who uses hand creams? Mostly the housewife, who after washing the dishes in hot water, containing detergents or soap, gets the well-known "sudsy" or "detergent hands," where the natural acid mantle and also the natural fat protecting cover is rinsed off. Even if glycerin gives back a little protection, the slight alkaline cream (and it is alkaline, as we can see with a drop of phenolphthalein) does not help at all.

But modern chemistry has a lot of raw-material to overcome these drawbacks. Even without the modern nonionics it is possible to produce hand creams which have real value.

A very simple formula is an old East-European prescription:

|                        |    |
|------------------------|----|
| 2% Boric acid solution | 30 |
| Glycerin               | 24 |
| Lanolin anh.           | 16 |
| Paraffine Oil light    | 10 |
| Olive Oil              | 2  |

But if we want a hand cream, which is absolutely greaseless and nevertheless fat-containing, there are other means. A large German factory produces a hair conditioning cream advising (in an attached pamphlet) to try it as an after shaving cream and a hand cream too.

The quaternary amonium compounds are known for their benign effect on the scalp and skin. Their safe use is limited to 1% and so it can be used as an emulsifier for hand cream and lotion, depending on the fats used.

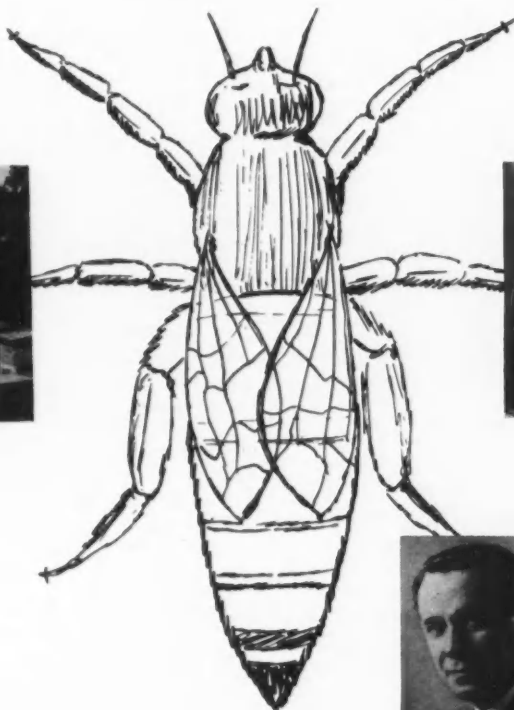
60 gr. of glycerylmonostearate (non-emulsifying) gives a lotion, whereas 120 gr., with addition of some spermaceti gives a cream. The use of citric or boric acid gives a new acid mantle to the skin while glycerin and sorbitol act as humectants.

Another formula is a combination of a mucilage and a cream:

|                                |     |
|--------------------------------|-----|
| 2% mucilage of methylcellulose | 730 |
| Sodium laurylsulfate           | 10  |
| Methyl p-hydroxybenzoate or    |     |
| Benzoic acid                   | 1.5 |
| Glycerin                       | 80  |
| Cetyl alcohol                  | 80  |
| Stearic Acid                   | 80  |
| Lanolin                        | 10  |

There are a lot of other formulas in this line, which will overcome the old drawbacks of hand creams and provide us with a really good basis for product research.

# WHY USE *Royal Jelly* IN COSMETICS?



R. B. WILLSON\*

***Allure of sex factor, presence of pantothenic acid the rejuvenating factor and antiseptic qualities as yet unexploited pointed out by expert***

**W**hy should a cosmetic be made with Royal Jelly? This is a proper question and the answer, be there an answer at all, will be discussed.

First of all, let us try to make clear what Royal Jelly is. The name obviously is an unfortunate one, once it is removed from the terminology of beekeepers. In beekeeping, the adjective "royal" is in order since it is used in association with queen bees, and the word "jelly" also is reasonably appropriate since the product viewed inside the honey comb has a gelatinous appearance, and, at a certain stage of its development, is actually jelly-like in consistency.

There is positively nothing harmful to the skin in Royal Jelly. Beekeepers, who work with it, have known this for centuries, and that this knowledge has been carefully verified by cosmeticians themselves in recent years in advance of using it in their preparations. Furthermore, there is not the slightest intimation in any of the literature or elsewhere that Royal Jelly induces the growth of hair.

## **A Glandular Secretion**

Royal Jelly is a glandular secretion, coming from the supra-pharyngeal glands located in the heads of young

adult female bees called nurse bees. Just as milk which is fed to a baby is a glandular secretion, so is Royal Jelly a glandular secretion, and so this may be, by analogy, considered the milk of honey bees.

Now Royal Jelly is the only food queen bees get from the time they hatch out of the eggs until they die. Other bees in their immature stages are fed a less rich food, as a result of which, they develop into adults completely unsexed, with no reproductive instincts whatsoever but with instincts to carry on all the working functions of the honey bee colony such as rearing the young, cleaning house, gathering honey and pollen, building honey comb, and guarding the hive against marauders. These are female bees, nevertheless, and are called worker bees.

Queen bees, on the other hand, fed Royal Jelly throughout their lives, develop beautiful large sleek bodies. They are sexually perfect, capable of laying twice their weight in eggs in one day and, at times, doing this over a prolonged number of days, manifesting a rate of metabolism that fills the physiologist with consternation, if not disbelief. Furthermore, this queen bee has a life span of from 2 to 6 years, whereas the worker bee, fed the less rich food, lives only 2 to 6 months.

Beginning back in 1888, scientists here and abroad have employed the techniques of research to ascertain why this food, Royal Jelly, should permit of such biological marvels. It has been analyzed, so that we now know

\*President, R. B. Willson Inc. Abstract from lecture before the New York Chapter of the Society of Cosmetic Chemists, September 28, 1953.



of what it consists, which over-all is about 65% water, 12½% protein, 12½% carbohydrates and 6% fats, 1% minerals, and balance undetermined matter. As is often the case, and as the chemist well knows, a gross

Markoff is one of them and the beauty theme was used recently in their advertising.

#### Sex Factor

Since Royal Jelly permits of reproductive wonders, it might be assumed that it contains a sex factor and, of course, it does, as certain scientists have demonstrated in experiments with other animals besides bees. In the distinguished quiet and conservatism of The Hitchcock Foundation at Hanover, N. H., Dr. H. L. Heyl, a physician, injected 21 day-old rats with a dilute sodium hydroxide extract, or an aqueous pyridine extract of Royal Jelly in amounts equivalent to from 60 to 700 milligrams of the natural substance. He found a precocious follicular development of the ovaries directly in proportion to the amount of Royal Jelly injected—proof enough of the presence of a sex hormone.

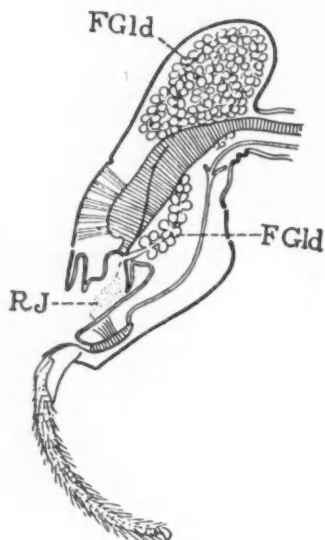
Townsend and Lucas, working at the Banting Institute in Toronto, fed Royal Jelly to *Drosophila* and greatly hastened sexual maturity and increased egg laying by 60%.

Abbot and French, at the University of Florida, demonstrated the presence of a sex hormone in Royal Jelly in spayed rats.

More details of these experiments have been recorded; so let us just observe that the presence of a sex hormone has been established. Let us say, in addition, however, that there is a matter of great scientific interest with respect to this sex factor in that it affects males as well as females. Most substances that affect sex influence one gender or the other, not both. However, in an as yet unpublished experiment, one of our leading New York research institutions fed male mice Royal Jelly in addition to the regular diet which was fed male mice in the check pen. On dissection, the male mice fed Royal Jelly were found to have testicles twice the size of those fed none.

In their experiment with feeding mice Royal Jelly, Townsend and Lucas gave only the ether soluble fraction and this they analyzed as 10-15% of Royal Jelly on

Glands of the head and thorax of a worker bee (From "The Hive and the Honey Bee" as described by Snodgrass.) FGld, the food glands of the right side in the head that produce royal jelly. RJ, the actual royal jelly ready for use.



analysis often does not reveal the most potent factors of a substance and does not here reveal any reasons why Royal Jelly might be used in a cosmetic. For example, it sheds no light on the fact that Royal Jelly creates beauty, which it does, since the queen bee is a beautiful animal compared with the worker bee. This factor of beauty might be considered a real reason for using Royal Jelly in a cosmetic, at least it has been emphasized in connection with the first two cosmetics sold in this country made with Royal Jelly. Elixir de

A digest on the literature of royal jelly indicates that the water concentration runs from 45 to 70 per cent, that the material is affected by both air and light and that it has an acid pH some place between 4 and 5. The following table shows a composite analysis based on the dry weight.

|                    | PROTEIN  | FAT        | SUGAR  | MICROGRAM/GM. FRESH MATERIAL |                |                |              |                  |        |            |            |
|--------------------|----------|------------|--------|------------------------------|----------------|----------------|--------------|------------------|--------|------------|------------|
|                    |          |            |        | B <sub>1</sub>               | B <sub>2</sub> | B <sub>6</sub> | NIACIN AMIDE | PANTOTHENIC ACID | BIOTIN | FOLIC ACID | C INOSITOL |
| Von Planta         | 45.5%    | 13.55%     | 20.39% |                              |                |                |              |                  |        |            |            |
| Haydak Dry         | 40.4-58% | 5.6-18.7%  |        | 1-2                          | 5-8            |                | 91-149       | 160-200          |        |            |            |
| Desperrois         |          |            |        | 2-6                          |                | 3-8            | 60-80        | 200-240          | 1-3    | 0.2-0.3    | 80-100     |
| Townsend-Lucas Dry | 35%      | 10.4-12.8% | 50%    |                              |                |                |              |                  |        |            |            |
| Elseer App Dry     | 14-38%   | 4-17%      | 17-25% |                              |                |                |              |                  |        |            |            |
| Melampy & Jones    | 12.34%   | 5.46%      | 12.49% |                              |                |                |              |                  |        |            |            |
| Pollen             |          |            |        | 9.3                          | 18.5           |                | 200          | 27.6             |        |            |            |

a dry basis containing from 5-10% phenols, 5-6% sterols and glycerides, 5-6% wax, 0.4 to 0.8% phospholipids and 80-85% unidentified acids. Professor Townsend is at work now with an associate, a Dr. Shuel at the Banting Institute, trying to identify those unknown acids which he has indicated contain the sex hormone.

### Value of Sex Factor in Cosmetics

We don't know whether a sex factor has any value in a cosmetic. It seems that it may have, indirectly or by implication, and if so, here may be another reason to use Royal Jelly in a cosmetic.

Now I think we come onto more solid ground. The cosmetician knows better than anyone the horror with which any woman views the first trace of a wrinkle on her face. Here in Royal Jelly we have a product that greatly prolongs life with queen bees since they live from two to six years, whereas the worker bees, that come from the same kind of eggs and not fed Royal Jelly, live only from two to six months. Experimenting biologists have prolonged the life span of other animals, notably Gardner, who increased the life span of *Drosophila* 46.5% by feeding Royal Jelly. Here again the gross analysis reveals nothing, but the experimental biologist has demonstrated that Royal Jelly is loaded with the B-Complex vitamins, and is the most concentrated form of pantothenic acid yet found. Since pantothenic is the longevity factor within the B-Complex it is quite understandable that Royal Jelly should prolong life. It's great concentration in Royal Jelly explains full well the long life of queen bees.

### Rejuvenation Factor

The presence of a longevity factor, or rejuvenation factor, having been clearly established in Royal Jelly, the logical observation is that since there is no more forceful appeal to make than to the perpetuation of youthfulness, that here is a good and strong reason for using Royal Jelly in a cosmetic.

We are going to mention one more reason why we think Royal Jelly might be used in a cosmetic. Let's reflect on the nature of Royal Jelly. We said it is a glandular secretion which averages about 65% water, 12½% carbohydrates, 12½% protein, and 6% fats, plus some other things. Now the scientist, especially the bacteriologist, looks at that analysis and says to himself—that stuff will spoil and spoil fast. But it doesn't, and this property of Royal Jelly *also* has been a subject of scientific research in an American university (reported in the Review). It was found that even diluted with ten parts of distilled water, Royal Jelly was as powerful as most of the carbolic acid antiseptics on the market, and that Royal Jelly as well has a pronounced bacteriostatic property that prevented the growth of virulent bacteria.

### Honey is Antiseptic

In the early days of this century, it was found at the Colorado Agricultural Experiment Station that honey itself is antiseptic. Inoculated with the typhoid group of bacteria, including the deadly typhus, honey destroyed all of these bacteria within 24 hours. But this antiseptic property of honey had been known for centuries.

Whether this bactericidal or antiseptic property gets into Royal Jelly through honey which is the principal food of the bees, or whether it is synthesized within the glands of the bees, we do not know, but here is another property of this remarkable product that is in fact beneficial, and the extent of its value in this connection may be great. In another as yet unpublished piece of work, this having been done by a famous New York institution

of higher learning, on autoclaving Royal Jelly under pressure at a fairly high temperature—the bactericidal property was increased 50-fold. The scientist in charge told me all that was known was that something had been released—something no doubt applicable to the cosmetic industry.

So here you have it: a product that creates beauty, that has the allure of having a sex factor, that has been demonstrated to prolong youthfulness, and that has sensational antiseptic qualities as yet unexploited. Now it is for you to say whether there are reasons for using it in cosmetics.

Mr. Willson has been associated with the beekeeping industry for almost 40 years. As a young man he specialized in biological sciences and entomology and finally beekeeping at Cornell University. After serving in World War I he continued his studies at Mississippi State College and then returned to Cornell University where he was on the faculty in the biology department as a specialist in apiculture. He is a director of the Honey Utilization Committee of the American Beekeeping Federation, is vice chairman of the Honey Industry Council and president of the National Honey Packers and Dealers Assn.

### Borrowing Money

THOSE who borrow from banks have probably observed that the bankers are extremely careful to protect their loans.

Sometimes borrowers protest that the banks demand too much protection.

An old banker meets such squirming with a single question.

"You don't anticipate that you won't be able to pay this note, do you?" he asks.

"Why, certainly not," exclaims the borrower.

"Well, then, what difference does it make what you sign? If you pay the note we can't touch you. If you don't think that you can pay the note we'd prefer not to do business with you at all."

That's pretty hard on the borrower, because the argument is almost unanswerable.—William Feather.



"Just our name? Are your agency copywriters on strike?"

# S. C. C. Honors Its Founder



Dr. Ernest Guenther receives the S.C.C. Medal from retiring President Dr. Kenneth L. Russell.

***Honorary membership conferred on Maison G. deNavarre . . .  
Dr. Ernest Guenther awarded coveted medal . . . History and  
achievements of the Society outlined on tenth anniversary***

**T**he vital part that the Society of Cosmetic Chemists plays in the development of the industry along sound scientific lines was evident in many ways at the tenth anniversary meeting in the Hotel Commodore, New York, December 15. The meeting was also notable for three events:

- First the surprise honor accorded to Maison G. deNavarre, founder of the Society, when honorary membership in it in recognition of his unflagging interest in the Society and his services to the cosmetic industry was conferred on him.

- Second the award of the Society's coveted medal to Dr. Ernest Guenther, "Mr. Essential Oil," for his work in raising the standards of purity of the materials used by the industry and for his monumental literary work.

- Third, for the excellent character of the papers presented at the meeting.

## **Tribute to the Founder**

Judging from the lusty applause that greeted Mr. deNavarre after the banquet when the scroll conferring honorary membership was presented to him by Dr. Kenneth L. Russell, the honor was richly deserved by the founder as it was in appreciation of the service

he has rendered to the Society and to the cosmetic industry. Mr. deNavarre was first president and in 1952 he was the medalist.

A graduate of Wayne University, Mr. DeNavarre entered the cosmetic field in 1930. He joined Beauty Counsellors, Inc., Detroit, Michigan, in 1947, and is now Vice President in charge of manufacturing and research. Well-known as consultant and researcher, his writings on cosmetics have been widely published. His book "Chemistry and Manufacture of Cosmetics" which has already run through five editions and is now being completely revised is regarded as the outstanding work on the subject. He is technical editor of *AMERICAN PERFUMER & AROMATICS* and writes the monthly column titled "Desiderata." During 1947 he was a consultant with the Camouflage Branch, Engineers' Bureau, United States Army.

In awarding the honorary membership, President Russell cited Mr. deNavarre for his devotion to the cosmetic industry over the years and paid special tribute to him as a founder of the Society of Cosmetic Chemists.

## **History and Achievements of the S. C. C.**

Launched in 1945 with 12 charter members, the



Upper left: On their way to the banquet: Dr. Herbert Sommer, Dr. and Mrs. Oliver Marton and A. A. Schaal.

Upper right: Dr. Walter Taylor, Dr. E. G. McDonough and Maison G. deNavarre are snapped with their wives at the reception.

Middle left: President George Kolar and Mrs. Kolar and Membership Chairman Michael A. Stanton pause during the reception to discuss the complete success of the meeting.

Middle right: Informality is the note as Dr. Herbert Sommer, President-elect Sabbat J. Strianse, Miss Lorraine Magan and Maison G. deNavarre engage in a friendly conversation.

Lower left: The gaiety which marked the reception was shared by Dr. and Mrs. Sol D. Gershon, Mr. and Mrs. Ray E. Reed and Dr. and Mrs. Stephen Karas, seen at the affair.

Lower right: Three doctors also experts in law at the meeting: Dr. Dan Dahle, formerly chief of the Cosmetic Division of the Food & Drug Administration; his successor, Dr. G. Robert Clark; Dr. Samuel Zuckerman.





Upper left: Toastmaster Savery Coneybear, Medalist and former President Dr. E. G. Klarmann, Dr. G. Robert Clark, chief of the Cosmetic Division of the F.D.A., former President Dr. E. G. McDonough, President George Kolar and Gabriel Barnett exchange views.

Upper right: Arthur J. Cohane and Irving Levenstein listen attentively to Theodore Ostrowski, Treasurer of the New York Chapter of the S.C.C. as he modestly parries questions on how he manages to transact the financial affairs of the Chapter in such a competent manner.

Middle left: President George Kolar congratulates President-elect Sabbat J. Strianse while retiring President Dr. Kenneth L. Russell and Mrs. Russell look on approvingly.

Middle right: One of the groups snapped before the banquet: Mr. and Mrs. John Montgomery, Vincent DeFeo, Fritz J. Schubert, Mrs. Schubert, Dr. Ernest Guenther, Theodore Waugh, Harry Isacoff, Edward Tajkowski.

Lower left: Edward Morrish towers above his friends Mr. and Mrs. Gabriel Barnett as he questions Mr. Barnett about the Cosmetic Seminar of 1956 which he will again arrange.

Lower right: Good fellowship was evident on all sides, especially in the group made up of Henry Eickmeyer, Dr. Oliver Marton, Dr. Stephen Karas, Bernard Wirsing, Martin Ganzla, Harry Isacoff, Gert Keller.



Upper left: Christian F. Wight congratulates Walter Wynne, chairman of the banquet committee on the efficient way he handled a multitude of details. Dr. Donald Price and Dr. Darrell Althausen share the richly earned approval of his work.

Upper right: Dr. Emil G. Klarmann, president of the Chemical Specialties Manufacturers Assn., Charter Member, former President and Medalist of the S.C.C., author and scientist, and Mrs. Klarmann, snapped at the banquet.

Middle left: Hans Weseman tells a well turned anecdote to John S. Cassula which is much enjoyed by Mrs. Bayliss and Miss Neary as they pause on their way to the banquet.

Middle right: Dr. Julius Wetterhahn answers a technical question put to him by Mrs. Gust Carsch, while Gust Carsch and Mrs. Wetterhahn show their interest in the problem.

Lower left: Distinguished scientists: Louis J. Burris, Herbert Edelstein, Benjamin Perry, Irving Klapp, Ralph M. Stevenson, A. Shanksy, J. Faulkner from Australia, James Murray and Samuel Lieberman.

Lower right: I. R. Hollenberg, chemist, lawyer and raconteur, snapped during a serious conversation with Paul N. Sperry and Fred Fielding, perfumer, over one of the technical papers read at the meeting.



Officers who contributed much to the success of the meeting: Robert Kramer, Gabriel Barnett, President George Kolar, Savery Coneybear and Dr. Walter Taylor.

Society of Cosmetic Chemists now has a total membership of 450 and a program of activities and awards that is international in scope.

The organization was the idea of Maison G. deNavarre, who assembled eleven other charter members into the group designed as the Society of Cosmetic Chemists. The other founders were Philip Adams, James Baker, Robert E. Casely, Emery A. Emerson, Emanuel G. Gundlach, Stephen A. Karas, Emil G. Klarmann, Raymond E. Reed, Marcel J. Suter, Walter A. Taylor, and Cloyce L. Thomas.

The first meeting was held May 23, 1945 and provided the opportunity for scientists in the field to meet and exchange ideas and problems. The objective of the organization, written into the by-laws, is "To establish a medium through which scientific knowledge of the toilet goods industry can be disseminated, and to improve cosmetic and perfumery technicians' professional standing."

Today the Society is known to scientists the world over, and its membership rolls are drawn from all the principal countries of the world. The parent organization has local chapters in Chicago and New York. The Society of Cosmetic Chemists of Great Britain is associated with the national group here.

Outstanding among its activities is the publication of the *Journal of the Society of Cosmetic Chemists*. Issued five times a year, the journal is well-known in the field of scientific literature, with many international subscriptions included in its circulation. Maison G. deNavarre is editor of the publication.

The Society has created a specialized technical library, located at its New York headquarters, which is available to all members. The collection includes out-of-print volumes, purchased at auction, many of which are collector's items. An employment service maintained by the Society is open to members and non-members alike, and is widely used by individuals and firms in the cosmetic field.

The Society's Medal Award, a feature each year of the December meeting, is a citation that is internationally recognized and sought. Awarded for the first time in 1949, the medal honors outstanding work in fields relating to the art and science of cosmetics.

Another feature of the annual program is its Cosmetic Seminar. Held in 1954 for the first time, the event was repeated in September, 1955, and drew a



Maison G. deNavarre pauses to clear up a technical point raised by Lee Feltz and Savery Coneybear.

Dr. Paul G. I. Lauffer finds himself in the middle of a friendly discussion by Stephen Capkovitz and Paul Lelong.



panel of distinguished speakers and a fully-subscribed attendance of 225 to the two-day session.

An even more recent activity of the Society's agenda is its Special Award to the authors of distinguished published literature in the field of cosmetic technology. The award, initiated this year, was instituted to encourage fundamental research as an aid in developing new and better cosmetic products. The 1955 presentation, carrying with it an award of \$1,000 made up of contributions from 41 firms in the cosmetic and allied industries, went to Dr. Stephen Rothman.

During the first seven years of its existence the Society of Cosmetic Chemists was virtually "homeless," having no permanent meeting place. In 1952 the New York Academy of Science invited the Society to share its building at 2 East 63rd St., and the office and meeting rooms are now located at that address.

#### Medal Award to Dr. Ernest Guenther

Dr. Ernest Guenther became the eighth recipient of the Society's medal, its highest award for contributions to the science and art cosmetics. In presenting the medal Dr. Kenneth L. Russell, president, lauded Dr. Guenther for his distinguished work on essential oils in the past 30 years. The official citation accompanying the award paid tribute to him for his work in raising the standards of purity of materials used in the industry. Dr. Guenther was introduced by Dr. E. G. Klarman himself a past president and also a medalist, who spoke on "My Friend, Ernest Guenther." Edward Langenau, a close personal friend, spoke on "Ernest Guenther, the Scientist." Dr. Guenther has been active in the cosmetic field since 1921. In 1924 he joined Fritzsche Brothers Inc. in New York as chief research chemist. Since then he has virtually travelled all over the world checking up on sources of supply of raw materials. His monumental six volume work on "The Essential Oils" is recognized as the foremost work on the subject. To his skill as a scientist Dr. Guenther adds skill as a writer and as a photographer, as well as a lecturer.

#### New Officers Installed

George G. Kolar, president of Kolar Laboratories Inc. Chicago was installed as president of the Society by the retiring President, Dr. Kenneth L. Russell.

The other newly-selected officers of the Society are President-Elect Sabbat J. Strianse of the Vick Chemical Co.; Treasurer, Walter A. Taylor of Chesebrough-Pond's, Inc.; and Secretary, Robert A. Kramer of Evans



A genuine surprise came to Maison G. deNavarre, founder, first president, author and scientist, when President Dr. Kenneth L. Russell presented a scroll making him an honorary member of the Society.

Research and Development Corp. The directors for the coming year are Gabriel Barnett of Warner-Hudnut and Savery F. Coneybear of the Colgate-Palmolive Co.

In sessions before and after the luncheon, seven technical papers were presented by outstanding specialists. Abstracts of the papers follow.

#### New Silicones For The Cosmetic Industry

THIS paper describes the chemical nature and general properties of three new types of silicones. Special emphasis is placed on properties such as compatibility with a variety of materials, light absorption and water repellency.

The first type of silicone is an hydrophobic silicone fluid exhibiting ultraviolet light absorption in the 220 to 420 millimicrom range. This type of fluid may find use as a water repellent sunscreen agent. The second group of silicones consists of fatty alcohol esters of dimethylpolysiloxane. These wax-like silicones are generally soluble in waxes, esters and alcohols. They may be useful in lipstick and other solid cosmetic preparations. The third series of silicones are acid-free reaction products of ethylene glycol or polyethylene glycol with dichlorodimethylsilane. These liquid esters are soluble in many polar solvents.—Abstract of S.C.C. paper by C. C. Currie and R. C. Gergle.

(Continued on page 80)



Speakers who presented timely and informative papers: Edward J. Matson, Dr. Paul G. I. Lauffer, R. C. Gergle, J. C. Winters, V. K. Babayan and Joseph V. Klauder. A. H. Gould, another speaker was absent when the photograph was taken.



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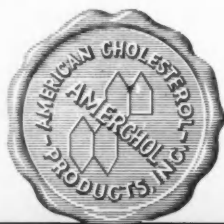
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## Perfumers in Profile

F. V. WELLS\*

During my most recent trip to Paris, when I was invited to address the French Society of Cosmetologists on Hair Preparations at Sorbonne, I had the opportunity of meeting many interesting people in the world of perfumery.

One was that charming man and inspired perfumer, Monsieur Ernest Beaux. Squarely built and rather on the short side, he has a commanding presence and moves with the precision of an army officer. Although he has reached the age of retirement and did in fact relinquish his position as Chanel's technical director over a year ago, he remains youthfully middle-aged and incurably energetic, and still reads (how I envy him!) without the aid of glasses. When talking of his favourite subjects—painting, sculpture, music, good wine and good food—his face lights up with enthusiasm and appreciation. I remembered having been told by another perfumer who knows him well that M. Beaux was born in Moscow and speaks the purest Russian. In the first World War he won the French Croix de Guerre and Legion d'Honneur, the Russian Military Cross of St. Vladimir, and the British Military Cross. Here obviously, I thought, we have that remarkable alliance of the dreamer and man of action, the poet of perception and the forceful man of affairs.

Feeling very much a student in the presence of a celebrated professor, I naturally wanted to talk to M. Beaux of his preferences in perfumery, but first of all (it being the hour after lunch) we fell to talking about wine and music. Over a glass of mellow but fiery Calvados more than 100 years old, we sat in a delightful room walled with paintings and discussed Beethoven, Moussorgsky and the wines of Burgundy.

Now, as to perfumes, what are his favorites? What does the great master who created Chanel 5 and Soir de Paris think of modern tendencies? On the whole, he approves of them. He is an admirer of Lanvin's Arpège and Worth's Je Reviens, of Coty's L'Origan and Guerlain's Jicky. Of his own perfumes his favourite is that subtle and delightful fragrance, Bois des Isles. A good perfume, he says, should be based, like good music, on a sustained series of related impressions. Perfumes are not static: *plus ça change, plus c'est la même chose*, but all the changes must be skilfully interwoven, to give an effect that stimulates and yet remains characteristic all through its transition. It is essential, adds M. Beaux, that the perfumer knows all his raw materials intimately and, of course, that he should possess imagination and good taste. "After that, it is a matter of creating not one but several perfumes, to blend and succeed one another harmoniously."

Earlier in the week I had met Monsieur E. P. Meunier, chief perfumer of Germaine Monteil, of Paris, New York, Geneva and South America. Currently president of the French Society of Perfumers, M. Meunier is a modest but assured man of wide experience, a patient and able interpreter of modern fashion. Writing these notes a fortnight after our meeting, I can still sniff appreciatively the smelling slip that he gave me of the latest Monteil perfume, not yet on the market. During our conversation we managed to discuss quite a number of currently popular perfumes, from the technical point of view, and he showed me an excellent perfumed cologne that Germaine Monteil presents in an attractive glass aerosol. M. Meunier and I agreed to disagree on the subject of the inherent danger of unprotected glass aerosols—he rightly thinking the glass surface much more

\*Member of the Société Technique des Parfumeurs de France. Editor, Soap, Perfumery & Cosmetics, London.

attractive than that of a plastic wrap but also insisting (inadvisedly, in my view) that the danger risk with unprotected glass is negligible.

And so to dinner with Monsieur Jacques Weill and M. Enver Arif, at the Pomme d'Amour. Unfortunately Mr. Henry van Ameringen (whom I had first thought to be a Frenchman educated in the U.S.A. instead of a young American who speaks excellent French) had a prior engagement and could not make a fourth. Born in Istanbul, Turkey, M. Arif has a brilliant record as perfumer to some of the leading perfumery and haute couture houses. He is now technical director of van Ameringen-Habeler of Paris, an associated concern of the well-known U.S. organization. Many readers will remember his short but stimulating article on the uses of Gamma-Undecalactone in Perfumery, which aroused widespread interest in France and elsewhere three or four years ago. We spoke together about Schiff bases and the perfuming of soaps and of current tendencies in perfumery. He is a connoisseur of the unusual. One of the products that he mentioned was an aromatic derived from shellfish, which smelt interestingly of fresh fish, nerol and ambreine—but was only of academic interest and was never actually available on the market. (This reminds me of the fact that M. Ernest Beaux has described the odour of nerol as "lemon juice, the sea and fresh oysters.") Such curiosities, especially when they may be sex-attractants, naturally arouse the interest of the imaginative perfumer, even if he decides not to make use of them.

Later, in the company of that excellent linguist and guide, the irrepressible Charles ("Beaujolais") Roux, of Pierre Chauvet et Cie, I had the pleasure of lunching with Madame Jacqueline Fraysse, perfumer to the Mon-savon and L'Oréal companies. What she doesn't know about the perfuming of soaps is really not worth knowing. It was a pleasure for me, too, to meet a young woman who not only uses perfumes but is able to create them.

I also met, during my stay, a number of other interesting people in the French perfumery industry who, though not themselves perfumers, exert an important influence on the world's perfumery industry. First there was Monsieur Albert Verley, that altogether charming and remarkably energetic gentleman of 88, who spoke so learnedly with my companion, Dr. S. Sabetay, and myself about the latest developments in indane derivatives and irones and the recent researches of Professor Normant. At the opposite side of Paris, after a long and far too exciting automobile ride in the gathering dusk, I met MM. François and Antoine de Laire. Theirs is a house with a great history, and one that is still very active in the pharmaceutical and perfumery fields. After a brief telephone conversation with M. Louis Amic, of Roure Bertrand Fils et Justin Dupont (whose Dr. Jean Sfras I had the pleasure of meeting at the Sorbonne), I raced back across Paris to see M. Pierre Chauvet, who is such an outstanding personality nowadays in the world production of essential oils and absolutes.

I am indebted to so many people for their hospitality that it would be quite impossible for me to mention each by name. Will they please accept these hastily written notes as a slight token of my sincere thanks.

#### **COSMETIC TAX COLLECTIONS FOR FISCAL YEAR**

Cosmetic retailers' excise taxes for the fiscal year ending June 30, 1955 were \$71,829,000. For the fiscal year ending June 30, 1954 the total was \$110,149,000. This does not represent a decline as the retailers excise tax of 20 per cent was reduced to 10 per cent, after March 31, 1955.

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# New Record for T.G.A. Scientists

**Meeting of Scientific Section Crowded with Interested Chemists and Scientists Attracted by Splendid Program. Members welcomed by President John A. Ewald . . . Dr. Dan Dahle Conducted Meeting**

The largest meeting of chemists and scientists ever held by the Scientific Section of the Toilet Goods Assn. took place at the Waldorf Astoria, New York, December 14 when about 500 gathered to hear and discuss the splendid program of papers.

Dr. Dan Dahle, with his lively sense of humor and his mastery of cosmetic science conducted the meeting with skill after the members and guests had been welcomed by President John A. Ewald. Every available seat in the crowded Serf room was required to accommodate the throng at the luncheon.

The eight papers read at the meeting were: "Aerosol Spray Patterns" by Morris J. Root; "Cream Shampoo Formulations" by R. L. Patterson of Procter & Gamble Co.; "The Factors Contributing to the Performance of Shampoos and to Consumer Acceptance" by Gabriel Barnett and Dr. Donald H. Powers, Warner-Hudnut Pharmaceutical Co.; "Tissue Culture Applications in Pharmacological Evaluation" by Ivor Cornman, Hazelton Laboratories; "Measurement of Perspiration Activity" by Otto Jacobi and Herbert Heinrich, Kolmar Research Laboratories; "In Vitro Test for Predicting the Effectiveness of Antibacterial Agents in Soap" by C. L. Bechtold, E. A. Lawrence and E. M. Owen, Colgate-Palmolive Co.; and "A Practical Approach to Container Development for Toiletries" by Albert R. Jasuta, Bristol Myers Co. Abstracts of the papers follow.

## Factors Contributing to the Performance of Shampoos and to Consumer Acceptance

A THOROUGH review of the literature clearly establishes the need for a new definition of a successful shampoo. It is stressed that some *cleansing* and *foaming* action is needed, but it is more important that the hair be left *soft, lustrous and manageable*. In studying these five characteristics of a successful shampoo, a new Latherometer is developed, and soaps, detergents and all of the leading shampoos are tested for their foaming and lathering action, varying the hardness of the water, the concentration of the detergent or shampoo, and studying the effect of sebum, sweat, soil, oils and hair dressings. It is suggested that a successful shampoo must have a high volume foam, with good stability and produce a "wet" foam. The new Latherometer appears to give reliable and reproduceable results and correlates end-use or consumer performance with laboratory evaluation.—*Abstract of T. G. A. paper by Gabriel Barnett and Donald H. Powers.*

## In Vitro Test For Predicting the Effectiveness of Antibacterial Agents in Soap

THE development of deodorant soap compositions necessarily requires the routine testing of potential antibacterial agents. Many of these agents are ineffective in the alkaline medium of soap, and may be rejected quickly from further consideration by the use of a test described in this paper—the Pellet Halo Test, a modified

agar plate technique using pellets of the deodorant soap composition. The next phase of testing is ordinarily an *in vivo* test such as that developed by Price and Cade. This is time-consuming as well as expensive. Thus, a need existed for a simple *in vitro* test which would reasonably forecast the results of the Cade Handwashing Test. This need resulted in the development of the Protein Adsorption Test which consists of washing ordinary cleared photographic film with a test soap composition, followed by evaluating the washed film for adsorbed and active antibacterial agent by use of an agar plate test. The Protein Adsorption Test permits the rapid selection of promising antibacterial agents from the many that are presented for screening.—*Abstract of T.G.A. paper by C. L. Bechtold, E. A. Lawrence, and E. M. Owen.*

## Cream Shampoo Formulations

PASTE cream shampoo of the sodium alkyl sulfate, sodium stearate system consists of crystals in an aqueous liquor. The size, shape and mode of aggregation of the crystals is responsible for consistency variations in the shampoo during normal shelf life. If shampoo is chilled soon after packing, crystal growth is too rapid and results in a thin, glossy paste of fine short crystals. In very hot weather, too slow crystal growth can occur and this leads to a soft curdly product. At a controlled intermediate rate, crystals are formed which are sufficiently long and entangled to produce a mat which is strong enough to support its own weight.

Processing techniques which have pronounced effects on crystal growth include cooling time, end or packing temperature, and tempering or early storage temperature. These are discussed as are the effects of some of the constituents in the formulation such as sodium stearate, free stearic acid, sodium sulfate, lanolin, and perfume.—*Abstract of T.G.A. paper by R. L. Patterson.*

## A Practical Approach to Container Development For Toiletries

CONTAINERS can be plus factors or pitfalls in the marketing of toiletry products. It is important that the evaluation, and choice of containers be carried out in a practical and scientific way. Considerations which deserve study and research include eye appeal protection and preservation; utility and function; costs, regulations and safety; operations at the filling plant.

The paper elaborates on these considerations and discusses how they are studied. It stresses the necessity of studying all considerations rather than just one or some. There is a dissertation on facilities and personnel for container development. Climate rooms, physical "beater-uppers," examining and measuring apparatus, corrosion testing equipment and other specialized equipment are included in the paper's scope. Requisites for personnel are given. The author draws on his company's facilities and program to explain and illustrate his points.—*Abstract of T.G.A. paper by Albert R. Jasuta.*

(Continued on page 82)

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|------------|---|
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| CEPHREINE  | pure Citronellyl Acetate                            |
| CEPHROL    | pure (+) Citronellol                                |
| HYDRONAL   | pure (+)Hydroxycitronellaldehyde                    |
| IPHANEINE  | pure <i>iso</i> -Butyl Phenylacetate                |
| LINDENOL   | pure ( $\pm$ ) <i>alpha</i> -Terpineol              |
| MELLOL     | pure Phenylethyl Alcohol (2-Phenylethanol)          |
| MEPHANEINE | pure Methyl Phenylacetate                           |
| MERANEINE  | pure Geranyl Acetate                                |
| MERANOL    | pure Geraniol                                       |
| PHANTEINE  | pure Linalyl Acetate                                |
| PHYLLOL    | pure Eugenol  |
| TRESSEINE  | pure <i>iso</i> -Amyl Salicylate                    |
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J. B. Knight, Sr.  
Founder & General Mgr.



### AN AMERICAN SUCCESS STORY

**W**hat's the origin of a cosmetics firm? Just what is that acorn that produces the mighty oak? And once you have the seed, what kind of soil encourages growth?

One company that is a flourishing young stripling today had its first unlikely origin back in 1929 when two Tampa, Florida junior high school youths took vacation jobs. J. B. Knight, Jr., age 13, and his younger brother Finley, chose to occupy the Summer of that year by selling household products door to door for a large manufacturing concern. The venture proved happily lucrative, but unfortunately the Fall term brought a return to school and a decrease in sales with the result that the boys' father, J. B. Knight, offered to give a helping hand in meeting required quotas. At this time Mr. Knight, whose furniture store had closed about a year earlier because of depression doldrums, was supplying his customers direct from local wholesale furniture dealers. He began carrying the cosmetics and flavors on his rounds, and found that the new line sold easily. This business he gradually expanded into an independent wholesale distributing firm, which the boys joined when they finished school.

J. B., Jr. insisted that the business produce at least one of the products it sold, and so manufacturing was begun in the family garage, with the result that a new hair dressing and Old 97 itch lotion were shortly available to the Tampa consumer. Now, some twenty years later, over two hundred products are available in the company's Old 97 and Marti Dare lines, and the firm is one of the very few direct sales cosmetic houses in the country which manufactures its own products.

The business is still family owned and operated: J. B., Sr. is general manager; Finley is sales and advertising manager; J. B., Jr. is plant manager and perfumer; and A. Eugene Knight, a younger brother who joined the company in 1942, is production manager. At present there are 18 employees.

Old 97, already in use on the itch lotion, was selected as the firm name, and a picture of an old wood burner railroad engine with the name was made the company's trademark. In the 1890's these engines had been in common use, and the Southern Railroad engine with that number had entered southern folklore via a spectacular accident and a popular song of uncertain origin entitled, "The Wreck of the Old 97." The trademark is

placed on all the firm's products except cosmetics.

After three years of operation the business added a small printing plant to produce the necessary labels, cartons and other printed matter. Today all such material, including circulars, signs and order blanks, is made in the enlarged and modernized printing department.

Although flavors, mouth washes, medicines and insecticides are still among the two hundred products put out by the company, the bulk of the business is toilet goods. Marti Dare Cosmetics, the division of the company which handles these products, offers such odors as Dare-U, Truly Fair, Florida Fragrance, Gardenia in such forms as perfumes, colognes and sachets, powders, lipsticks, skin creams, soap, nail polishes and deodorants. For the men there is the Sea King line of stick cologne, after shave lotion and hair cream.

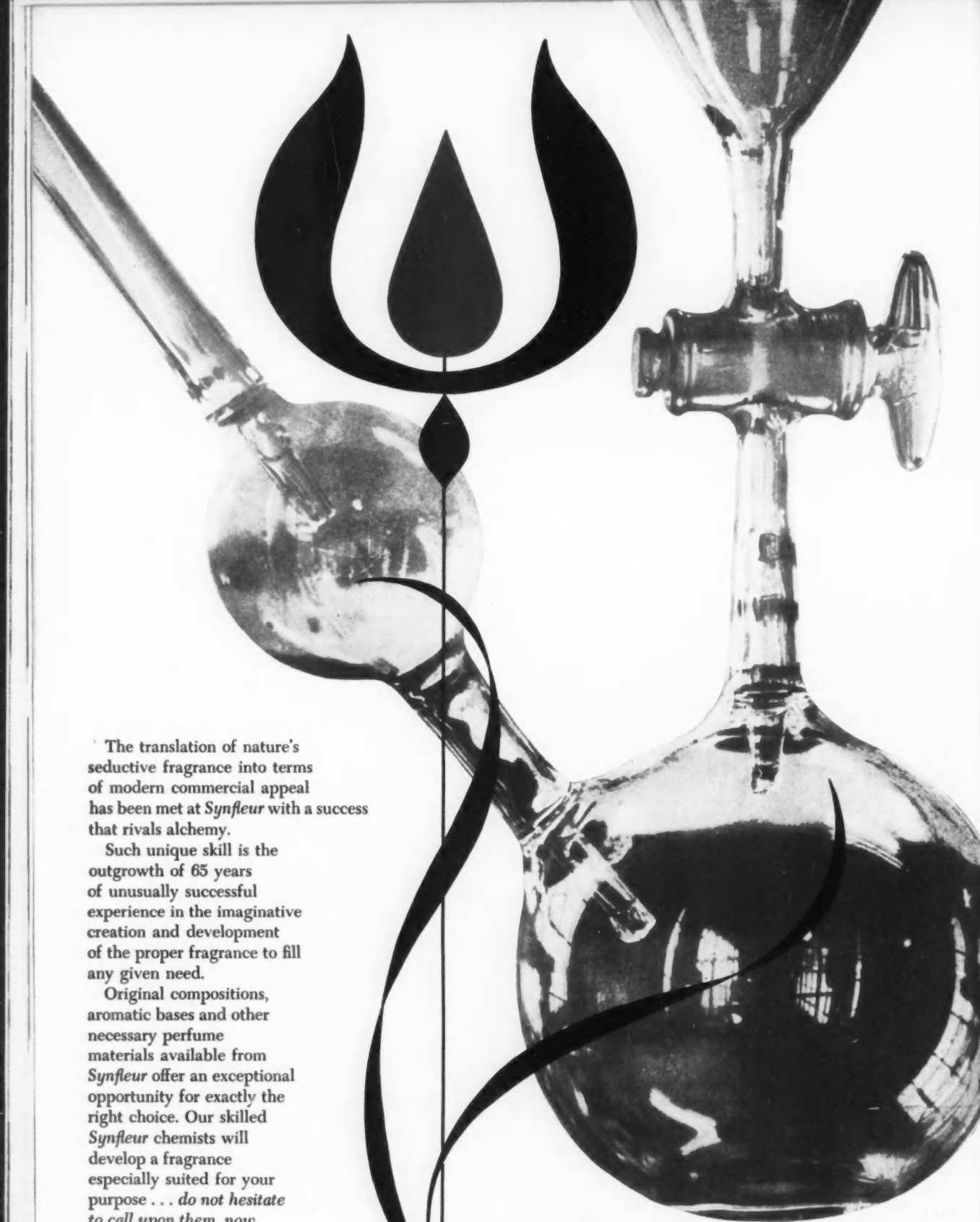
Examples of the perfumes are Parfum Fleur de Oranger, a fine orange-blossom odor, Florida Fragrance and Evening in Ybor. The latter receives its name from Ybor City, Tampa's famous Cuban-Spanish quarter, and was introduced at the inauguration ball of Alcalde (that's Spanish for Mayor) Henry J. Fernandez last October. The scent, which takes 88 ingredients to make, is described as exotic, slightly oriental, with just a hint of smoky odor, a reflection of the excitement and mystery of the Latin City. The Florida Fragrance odor was presented recently at the opening of the new Greater Tampa Chamber of Commerce building. The odor was placed into the air conditioning ducts, thus reminding sight-seeing Tampans that their city boasts a thriving participant in the nation's cosmetic industry.

J. B. Jr., in his capacity as plant manager, acts as perfume chemist, though he has never had formal instruction in the field. The know-how comes from years of self-study, talking to others, and practical experience.

But it's the family as a whole who have successfully integrated the many complex phases of the cosmetic business—stocking almost four hundred raw materials from all over the world, manufacturing the finished products, packaging and labeling, naming and advertising, and distributing to the market.

The acorn of this oak was the jobs two high school boys took for the summer twenty-six years ago, and the soil is initiative, imagination and daring, liberally enriched with teamwork—a humus which indicates more growth for the Old 97 Company.





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MORRIS B. JACOBS, Ph. D.



## Raspberry Flavor

### FORMULATION

*Many of the constituents and components of natural raspberry flavor have been isolated but mere mixing of such components does not yield an adequate flavor. . . . There is still an art in the production of an imitation raspberry flavor.*

**R**ECENTLY I discussed the manufacture of imitation cherry flavor in this section of the AMERICAN PERFUMER and I pointed out that a number of papers have appeared in the literature which review the composition of various natural fruit flavors. Among these are the papers of McGlumphy<sup>1</sup>, Bedoukian<sup>2</sup>, and Benezet<sup>3</sup>, the latter, however, stressing artificial flavor formulations. Along these lines, a group of papers have appeared by members of the staff of Givaudan Flavors, Inc. in various journals and in their house organ, *The Givaudan Flavorist*. One of the first of this series was that of Adams, Merwin, and Mogavero<sup>4</sup>.

In comparison with investigations

on the volatile components of fruit flavors in general the work on the composition of raspberry flavor has been extensive. Over 26 years ago Elze<sup>5</sup> claimed to have isolated from the steam distillate of the volatile oil of raspberry nerol, anisaldehyde as the semicarbazone, irone as the *p*-bromophenylhydrazone, and an undetermined paraffin which melted at 43-44 deg. C. Other investigators, particularly, Coppens and Hoejenbos, Bohnsack, and McGlumphy were unable to verify the presence of these compounds in the flavor of natural raspberries and McGlumphy<sup>1</sup> says: the first three ingredients, namely, nerol, anisaldehyde, and irone "are very powerful

flavoring materials and are usually found in imitation raspberry compounds, irone coming from oil orris, nerol from neroli oil or lavender, bergamot, rose, etc., and anisaldehyde either added directly or resulting from the oxidation of anethole in anise or fennel oils. This suggests that Elze may have inadvertently worked with an adulterated product since all later experimenters have failed to confirm his work."

#### Natural Components

The major work done on the composition of natural raspberry flavor is that of Coppens and Hoejenbos<sup>6</sup>. They

## FLAVOR SECTION

found acetic, *n*-caproic, and benzoic acids; ethyl, isoamyl, benzyl, and phenethyl alcohols; biacetyl and menthone; benzaldehyde and ethyl acetate. They claimed that there were indications that acetyl methylcarbinol (acetoin), coumarin, and a salicylate were also present.

Bohnsack<sup>7</sup> who was principally interested in determining the amount of beta, gamma-hexanol, which is commonly known as leaf alcohol and systematically as 3-hexen-1-ol, checked much of the work of Coppens and Hoejenbos. In addition to the compounds found by these investigators, Bohnsack isolated isobutyl alcohol as well as the leaf alcohol.

McGlumphy reported that he and his staff had isolated from black raspberries: formic, acetic, benzoic, and hydrocinnamic acids; ethyl, butyl, isobutyl, isoamyl, and amyl alcohols; acetaldehyde, isobutyraldehyde, and benzaldehyde; acetone and biacetyl; menthol and menthone; and ethyl acetate, ethyl acrylate, ethyl salicylate and catechol. They were not able to find phenethyl alcohol or coumarin as reported by Coppens and Hoejenbos.

### Beta-Ionone

It is interesting to note that Wilson<sup>8</sup> made many analyses of raspberries to see if beta-ionone could be detected. He was unable to detect even traces of this compound in raspberry juice and concluded that the presence of beta-ionone in a raspberry flavor was indicative of it being an artificial flavor.

Naves<sup>9</sup> reported in 1947 that Bohnsack had isolated a minute amount of beta-ionone from the marc of raspberries. Naves indicated that Bohnsack thought that the beta-ionone might have resulted as a degradation product of carotene or some related product. McGlumphy, as noted above, and his co-workers did not find beta-ionone present in the samples of raspberries they analyzed.

### Imitation Flavor Components

Over ten years ago, I made a study of many of the raspberry flavor formulations that could be found in the literature. These were listed in 11 formulations in *Synthetic Food Adjuncts*<sup>10</sup>. In these formulations some 35 compounds are listed as suggested ingredients.

Among these are the components with aliphatic groups: such as the ethyl,

isobutyl, and isoamyl formates; the methyl, ethyl, propyl, isobutyl, isoamyl, and cyclohexyl acetates; the methyl, ethyl, isoamyl, and cyclohexyl butyrates; amyl isovalerate, ethyl enanthate, and ethyl sebacate. Among the esters having aromatic constituents are benzyl acetate; the methyl, ethyl, and benzyl benzoates; ethyl salicylate and methyl cinnamate. Other aromatic compounds found in such formulations are, phenethyl alcohol, benzaldehyde, cinnamaldehyde, butyl beta-naphthyl ether, bromelia, vanillin, eugenol, coumarin, and beta-ionone. Other ingredients that are suggested in raspberry flavor compositions are gamma-nonyl lactone and tartaric and succinic acids. Among the terpene compounds used are geraniol and linalool.

In addition to this relatively large number of recommended compounds for raspberry flavor compositions, I found that over 30 other compounds have been suggested for use in raspberry formulations. Among these are isopropyl and cinnamyl alcohols; methyl, propyl, isopropyl, isobutyl, hexyl, decyl, geranyl, terpinyl and benzyl formates; Rhodinyl, geranyl, neryl, guaiyl, dimethyl phenethyl carbinyl acetates; isopropyl isoamyl, citronellyl, and benzyl propionates; terpinyl butyrate; isopropyl and neryl isobutyrate; terpinyl valerate; ethyl succinate; methyl, ethyl, and isobutyl cinnamates; isobutyl, isoamyl, and benzyl salicylates; and geranyl anthranilate. Among other compounds mentioned are Rhodinol, isogeraniol, nerol, and farnesol; amyl heptyl acetaldehyde, amyl methyl ketone, methylacetophenone, benzylacetone, anisyl formate, isoeugenol, and isoeugenyl methyl ether. Still other compounds have more recently been suggested as noted in the formulation of Benezet detailed below.

### Raspberry Flavor Formulations

It is clear from the number of components given above that many raspberry flavor formulations have been suggested and that despite the large amount of work done on the composition of natural raspberry flavor, additional work has to be done for many are not satisfied with such compositions as are available.

Raspberry flavor formulations vary from relatively simple compositions containing six or seven ingredients to very complex formulations containing over 30 ingredients. It is of interest to note the change from formulations

which required natural oils to those which rely almost wholly on synthetic components.

As an illustration of the former, we can quote from Walter<sup>11</sup> who suggested the following formulation over 40 years ago:

|   |             |
|---|-------------|
| Isobutyl acetate                              | 3 lb.       |
| Amyl acetate                                  | 2 lb.       |
| Ethyl acetate                                 | 1.5 lb.     |
| Ethyl formate                                 | 0.5 lb.     |
| Benzyl benzoate                               | 6 oz.       |
| 10% Orris oil solution                        | 5 oz.       |
| Vanillin                                      | 3 oz.       |
| Pettigrain                                    | 12 drams    |
| Clove oil                                     | 12 drams    |
| Ceylon cinnamon oil                           | 6.75 drams  |
| 10% Jasmin oil                                | 1.125 drams |
| Rose oil                                      | 0.125 dram  |
| Some 25 years later, Blumenthal <sup>12</sup> |             |

suggested among several formulations, the following in which the reliance on natural oils is still marked:

|                        |          |
|------------------------|----------|
| Phenethyl alcohol      | 50 oz.   |
| Benzyl acetate         | 40 oz.   |
| Peru balsam            | 10 oz.   |
| Propyl acetate         | 10 oz.   |
| Clove oil, terpeneless | 5 oz.    |
| Cinnamon oil           | 5 oz.    |
| Amyl acetate           | 2 oz.    |
| Bitter almond oil      | 2 oz.    |
| Rose oil               | 2 oz.    |
| Neroli, synthetic      | 2 oz.    |
| 1% Orris solution      | 1 oz.    |
| Vanillin               | 1 oz.    |
| Ethyl acetate          | 0.5 oz.  |
| Coumarin               | 0.25 oz. |

To make the essence the above mixture was dissolved in 500 ounces of ethyl alcohol.

An example of a formulation in which all of the components are synthetic compounds is quoted by Jacobs<sup>10</sup>.

|                  |     |
|------------------|-----|
| Isobutyl acetate | 380 |
| Isoamyl acetate  | 250 |
| Ethyl acetate    | 200 |
| Ethyl formate    | 60  |
| Benzyl benzoate  | 50  |
| Vanillin         | 20  |
| Eugenol          | 15  |
| Linalool         | 15  |
| Cinnamaldehyde   | 5   |
| Ionone           | 3   |
| Geraniol         | 1   |
| Benzyl acetate   | 1   |

The essence can be made from the above formulation by diluting with 9 volumes of ethyl alcohol. It is interesting to note that in comparing the above composition with the first two, that some of the oils used have been replaced by their principal isolates.

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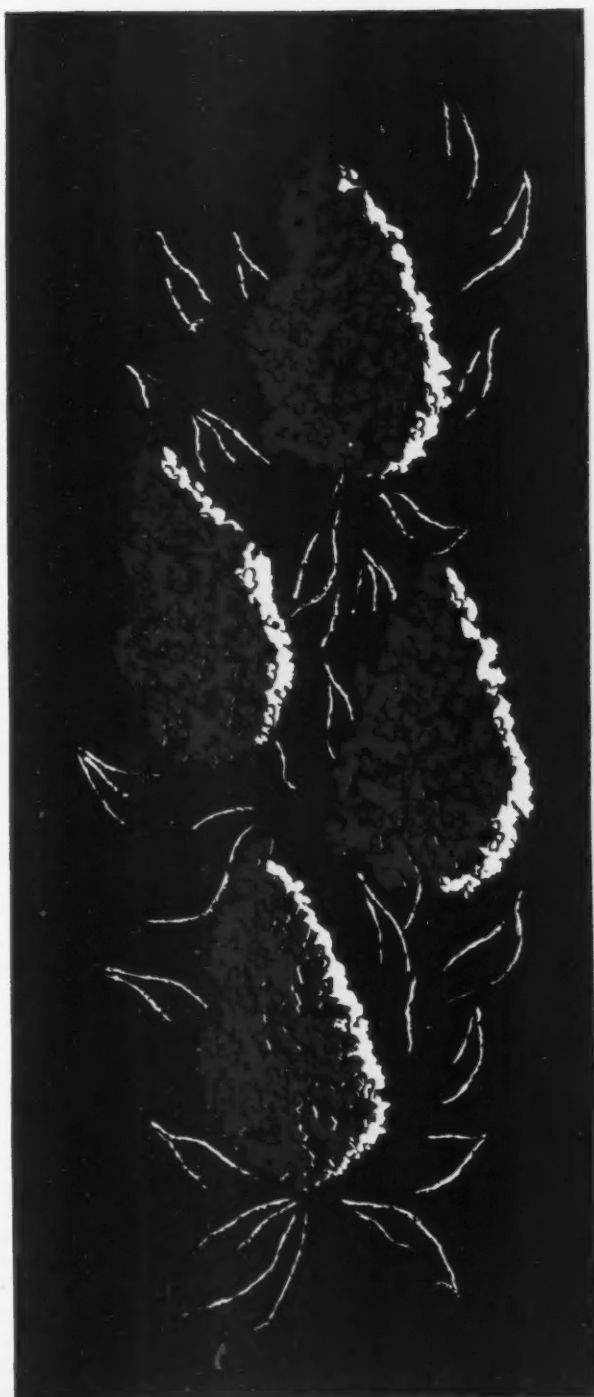
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The influence that more modern thought has had on the formulation of raspberry flavors can be seen in the following raspberry composition suggested by Benezet<sup>3</sup>.

|                                    |     |
|------------------------------------|-----|
| Ethyl methylphenylglycidate        | 400 |
| Benzylidene isopropylidene acetone | 100 |
| Methoxyacetoxyacetophenone         | 60  |
| Benzyl acetate                     | 50  |
| Phenethyl alcohol                  | 50  |
| Essence of Portugal                | 50  |
| Isobutyl acetate                   | 40  |
| Vanillin                           | 30  |
| Methylionone                       | 25  |
| Beta-ionone                        | 25  |
| Coumarin substitute                | 20  |
| Iris concrete essence              | 15  |
| Ethyl acetate                      | 10  |
| Ethyl caproate                     | 10  |
| Isoamyl caproate                   | 10  |
| Hexanyl acetate                    | 10  |
| Hexenyl acetate                    | 10  |
| Methyl salicylate                  | 10  |
| Bornyl salicylate                  | 10  |
| Ethyl benzoate                     | 10  |
| Methyl butanol                     | 10  |
| Essence of clove                   | 10  |
| Essence of geranium                | 10  |
| Hexanol                            | 5   |
| Hexenol                            | 5   |
| Anisaldehyde                       | 5   |
| Benzaldehyde                       | 5   |
| Acetylmethylcarbinol               | 3   |
| Diacetyl                           | 2   |

In the Benezet formulation an attempt is made to incorporate into the formulation those compounds which were isolated by Coppens and Hoejenbos and also Bohnsack. Benezet suggests that in addition to the compounds mentioned one might also use some of the cyclohexanol esters, some Rhodinol, and some borneol. He also recommends that a natural concentrate of raspberry juice be employed.

It is clear from all of these formulations that there is considerable art in the manufacture of a satisfactory raspberry flavor. One must also take into consideration the fact that for many years people were accustomed to two groups of raspberry flavor, one a "synthetic" raspberry and the other "natural" raspberry flavor and that it is likely that both groups will have customers for some time to come.

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## FLAVOR ABSTRACTS

**Aging or Maturing of Spirits.** Siegfried Kiesskalt. *Ger.* 824,936, Dec. 13, 1951 (Cl. 6d, 6). The spirits to be aged or matured are treated in vibrating ball mills, the driving frequency of which is of the order of 50-500 cycles/sec. A frequency of 100 cycles/sec. at an amplitude of 0.5 mm. is sufficient to bring about the desired aging effect. Porcelain vessels, vibrating tubes, or spiral tubes, possibly equipped with cooling devices, are suitable containers. Hard porcelain spheroids or steatite balls can be used as packing material. The treated spirits are improved with regard to flavor. *Thru C. A.* 49, 1278e

**The Melting Point of Cocoa Butter.** C. L. Hinton (Brit. Food Mfg. Ind. Research Assoc., Leatherhead, England). *Rev. intern. chocolat.* 9, 161-4 (1954). To determine the melting point of cocoa butter: Fill a small porcelain crucible with Hg and place in a tall, narrow beaker. Place the beaker on a flat porcelain dish which can be heated with a Bunsen burner. Insert a thermometer into the Hg and clamp in position. Melt cocoa butter at 40° and filter at the same temperature. Hold at 15-20° for one hr. and at 23-24° overnight. Drop small scrapings of fat onto the Hg and raise the temperature at a rate of 1°/min. Determine incipient melting as the temperature at which the edges of the scrapings soften and scrapings collapse. Determine the true or complete melting point as the temperature at which the fat becomes clear. Cocoa fat reaches a stabilization of its melting point more rapidly if kept at -18° or 23° than if kept at 0° or 10°. (C.A. 48, 11675) *Thru J. AM. OIL CHEMISTS' SOCIETY*, 32, 1, 42.

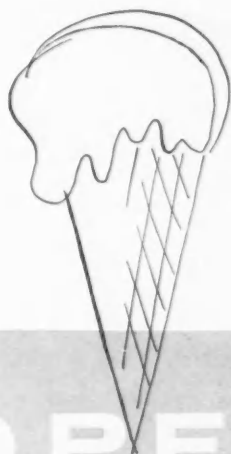
**Melting Point of Cocoa Butter.** E. H. Steiner (Brit. Food Mfg. Ind. Research Assoc. Leatherhead, Engl.). *Rev. intern. chocolat.* 9, 296-8 (1954).—Hinton (C.A. 48, 11675c) has demonstrated that the m.p. of cocoa butter depends upon the treatment given prior to the m.-p. detn. Cocoa butter exists in 4 modifications, viz., vitreous ( $\gamma$ ), a, b, and b' (cf. Sachse and Rosenstein, *Fette u. Seifen* 55, 196 (1953); Vacek, C.A. 46, 761c; Keil and Hettich, C.A. 48, 6046a). The vitreous form, being very unstable, transforms immediately to the a form. The a modification, m. 24°, is produced by

rapid cooling of liquid cocoa butter and is stable below 0° but transforms to the b and b' forms above its m.p. (24°). The b' cryst. state, m. approx. 28°, is comparatively stable at ordinary temp. It may be assumed that the a cryst. form is initially produced upon cooling the cocoa butter, the stable b nuclei develop on storage (more readily at -18° than at 0°), and the rate of transformation of the a form to the stable form increases with rising temp. and the no. of b nuclei present. The approx. m.ps. after some cold and heat treatments are listed. When prepg. the fat for m.-p. detn. it seems to be important to avoid conditions which lead to the formation of the b' modification and rather to facilitate the growth of stable b crystals from the nuclei. *Thru C. A.* 49, 4202e

**Japanese Mint. VIII. Adsorptive Purification of Japanese Peppermint Oil.** Masaaki Ito and Hosaku Kawahara (Hokkaido Ind. Research Inst., Sapporo). *J. Chem. Soc. Japan. Ind. Chem. Sect.* 57, 377-8 (1954); cf. C. A. 48, 13172d.—The purification of a peppermint oil by means of  $Al_2O_3$ ,  $SiO_2$ , Al silicate, active C, et., was tried, and the variation of color (measured by a spectrophotometer), flavor, taste and the loss of menthol content were examd. The most favorable adsorber was  $Al_2O_3$ . *Thru C. A.* 49, 4947b

**A New Method for the Determination of Volatile Oils in Spices and Drugs.** H. Hadorn, R. Jungkunz and K. W. Bieffer (Mitt. Lebensm. Hyg., Bern, 1954, 45, 3, 200-221). Various methods for the determination of volatile oils in spices and drugs are reviewed and some oxidation methods are critically examined. In a proposed new method, water is added to a weighed sample in a small beaker, which is then suspended in a special absorption vessel containing  $K_2Cr_2O_7$ ,  $H_2SO_4$  and heated in an oven at 103° to 105° for 1.5 to 2 hr. The oil is volatilised, absorbed by the dichromate soln. and oxidised. The excess of dichromate is determined iodimetrically. The proportion of oil is then calculated with the aid of an empirical factor previously determined for each type of material. Results obtained on various drugs and spices are given. *Thru Analytical Abstracts* 1, 3120 (1954).

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**Vanitrope<sup>\*</sup>**... a pure, vanilla-like flavoring, 25 times stronger than vanillin, yet saving you up to 50% in flavor costs, is ideal for vanilla ice cream, as well as being especially effective in intensifying such flavors as chocolate, butter, coffee, fruit, and nut.

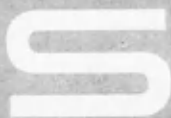
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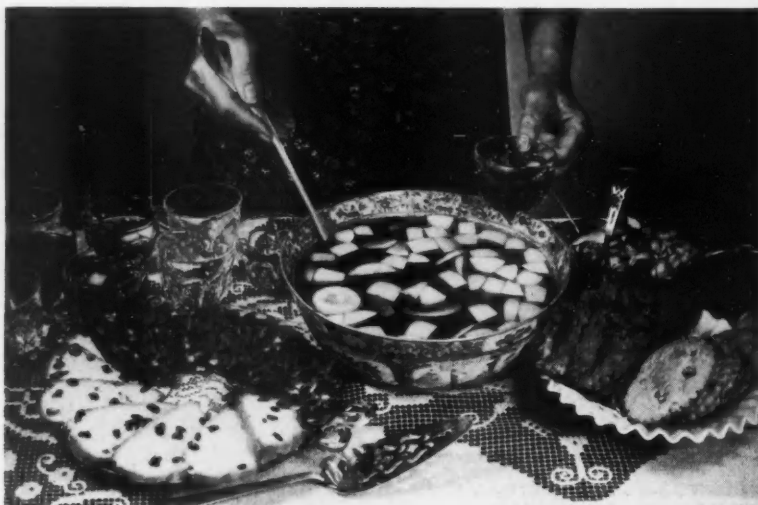


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# How GLYCERINE

## Enhances

## FLAVORS



Uses in preparation of natural and artificial vanilla extracts. . . . Use as a solvent. . . . Ability to blend and lend smoothness to flavor mixtures. . . . Use in emulsion type flavors. . . . Paste Formulations



ROBERT STETSON

**G**ENERATIONS of flavor makers have valued glycerine as one of the basic raw materials of their industry. Old recipes and modern formulations alike specify glycerine as a solvent and vehicle, for it adds body and smoothness while simultaneously blending and accentuating flavors.

Each year many tons of glycerine go into the manufacture of such varied products as extracts, flavor solutions, artificial oils and essences, flavor emulsions and pastes. These glycerine-containing compositions cover the entire range of flavors through fruits, berries, nuts, spices, chocolate, butter and many others.

Glycerine is one of the few solvents recognized by the Food and Drug Administration as acceptable for use in the manufacture of flavor compositions.

Its safety as a food ingredient has been established not only by generations of use in the preparation of many foods and beverages, but also by extensive studies by leading physiologists. In their now classic investigations at the University of Chicago, Carlson and the Johnsons<sup>1</sup> fed glycerine to human subjects over a period of 50 days in amounts as large as 110 Gm. daily without any demonstrable undesirable effects.

#### **Solvent and Vehicle**

While glycerine's safety is a primary consideration in its use in flavors, there are other important factors accounting for its wide acceptance by flavor formulators. Foremost among these is glycerine's superior solvent power. As is well known, because of the hydroxyl groups

in its chemical structure, glycerine has solubility characteristics similar to those of water and the simple aliphatic alcohols. It may be said that glycerine combines the solvent effects of both water and alcohol.

Some years ago, DeGroote<sup>2</sup> went into detail on the suitability of glycerine as a flavor solvent. He pointed out that when used for this purpose, glycerine

a. also acts as the vehicle for the flavoring principle and supplies it in a convenient and proper strength.

b. provides some preservative action.

c. is stable on storage and is not appreciably affected by ordinary changes in temperature.

d. may serve as an extracting agent (as in the case of vanilla extract).

Glycerine's sweet taste is another property adding to its value as a flavor

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solvent and vehicle. Depending on the concentration, it has a sweetness rating ranging from 55 to 75 per cent as compared to sucrose. Glycerine's pleasant taste, moreover, is compatible with other flavors.

The viscosity of glycerine is often used to advantage to lend smoothness to a mixture.<sup>3</sup> This property is also valuable where "body" is required in flavoring preparation. In such cases, glycerine at one concentration may equal or surpass a more viscous material at a higher concentration.

The high boiling point of glycerine, plus the fact that it is practically non-volatile at the temperatures of common use, are important considerations in relation to flavor retention, product stability and long shelf-life. The value of these properties is indicated by Triest<sup>4</sup> who advises that flavors which come into contact with hot materials, such as boiling syrups, should be compounded with non-volatile solvents like glycerine.

Levine also suggests<sup>5</sup> the use of glycerine as a high-boiling solvent to curb flavor losses. To reduce the volatility of essential oils, he recommends dissolving them in glycerine.

#### Vanilla Extracts

Over the years, glycerine has been extensively employed as a solvent—either as a partial or complete replacement for alcohol—in the preparation of both natural and artificial vanilla extract<sup>6</sup>.

Glycerine's place in natural vanilla extract is recognized in the Food and Drug Administration definition of vanilla extract: a flavoring extract prepared from vanilla bean, with or without one or more of the following: sugar, dextrose and glycerine . . .

In both the older maceration process and the more commonly used percolation process, glycerine can be used as an adjunct to alcohol or as a replacement for it in extracting the flavor principle from the beans. Jacobs<sup>6</sup>, for example, noting the solvency of glycerine for the active flavoring components of vanilla bean, suggests adding it at the beginning, instead of the end, of the percolation step.

In addition to acting as a solvent, glycerine frequently is added to the alcohol to assist in the maturing period<sup>7</sup>. It is during this process that the various ingredients slowly react with each other to form stable compounds.

An example of the preparation of vanilla extract using glycerine and no alcohol is the following procedure<sup>7</sup>: One pound of ground or chopped vanilla beans is added to a mixture of one-half gallon of water and one-half gallon of glycerine. The entire batch is allowed to stand for two weeks after

which it is strained through muslin or similar material. Finally enough glycerine is added to make a total volume of one and one-half gallons.

Another approach to the production of non-alcoholic true vanilla flavor is through the use of vanilla oleoresin. According to Belanger<sup>8</sup> such a product can be made from:

|                      |            |
|----------------------|------------|
| Oleoresin of vanilla | .....4 oz. |
| Glycerine            | .....4 pt. |
| Water                | .....4 pt. |

**Heat the glycerine to 230° F. and dissolve the oleoresin in it. Gradually add the water (hot) with constant stirring. Let stand several hours and strain through cheese cloth.**

Imitation vanilla flavors are compounded with only five or six basic ingredients, of which glycerine, of course, is one. Its importance in making imitation vanilla extracts rests, among other considerations, upon its ability to dissolve vanillin, the chief flavor component of these products. Moreover, because vanillin readily forms supersaturated solutions in mixtures containing glycerine, it is possible to prepare solutions of high concentrations.<sup>9</sup>

Some flavoring houses supply imitation vanilla concentrates which require only simple dilution with glycerine and water to yield the desired product. Illustrative is the following commercial formula, which can be modified to meet price conditions:

|                   |              |
|-------------------|--------------|
| Water (120° F.)   | .....11 gal. |
| Glycerine         | .....4 gal.  |
| Imitation vanilla |              |
| 16X(Cosmo*)       | .....1 gal.  |

\* Dodge & Olcott, Inc.

**Mix the water and glycerine and add the imitation vanilla. Mix well.**

Several years ago, in studies sponsored by the Glycerine Producers' Association, Lenth<sup>10</sup> developed a superior vehicle for making vanilla flavors. Designed to meet cost considerations and avoid the red tape associated with alcohol procurement, the formula calls for:

|                      |                |
|----------------------|----------------|
| Corn syrup (43° Be.) | .60.6 per cent |
| Glycerine, U.S.P.    | .26.3 per cent |
| Water                | .13.1 per cent |

It has been shown that this solvent has the advantage of cheapness, fluidity, stability, and freedom from fermentation. Solubility data show that this corn syrup-glycerine vehicle is capable of dissolving 1.19 per cent by weight of vanillin at 25°C.

Obviously the properties that make glycerine so useful in the production of vanilla flavors are of equal value in formulating numerous flavoring compositions. Even a casual check of the technical literature of the flavoring industry will show how glycerine has contributed to almost the entire range

of flavors including natural, fortified, and synthetic compositions.

#### Natural Flavors

A representative natural flavor compounded with glycerine is malt extract, a product frequently used in the bakery and beverage industry and also to some extent in candy making. According to Adams<sup>11</sup> malt extract is prepared by infusing malt with water at 60°C., concentrating the expressed liquid at a temperature not exceeding 60°C. and adding 10 per cent of glycerine by weight.

As noted by Goldman<sup>12</sup> glycerine finds use as a non-volatile solvent in the production of spice oleoresins. In one patented process<sup>13</sup>, the essential oils of certain spices are fortified in color and taste by the addition of non-volatile substances extracted from the spice by polyhydric alcohol solvents. Glycerine and its mono ethers are specified as suitable solvents for this purpose.

Many flavoring compositions are readily prepared by incorporating an appropriate essential oil in a glycerine-containing vehicle. Quite typical is the following formula<sup>14</sup> for making a cassia (cinnamon) extract:

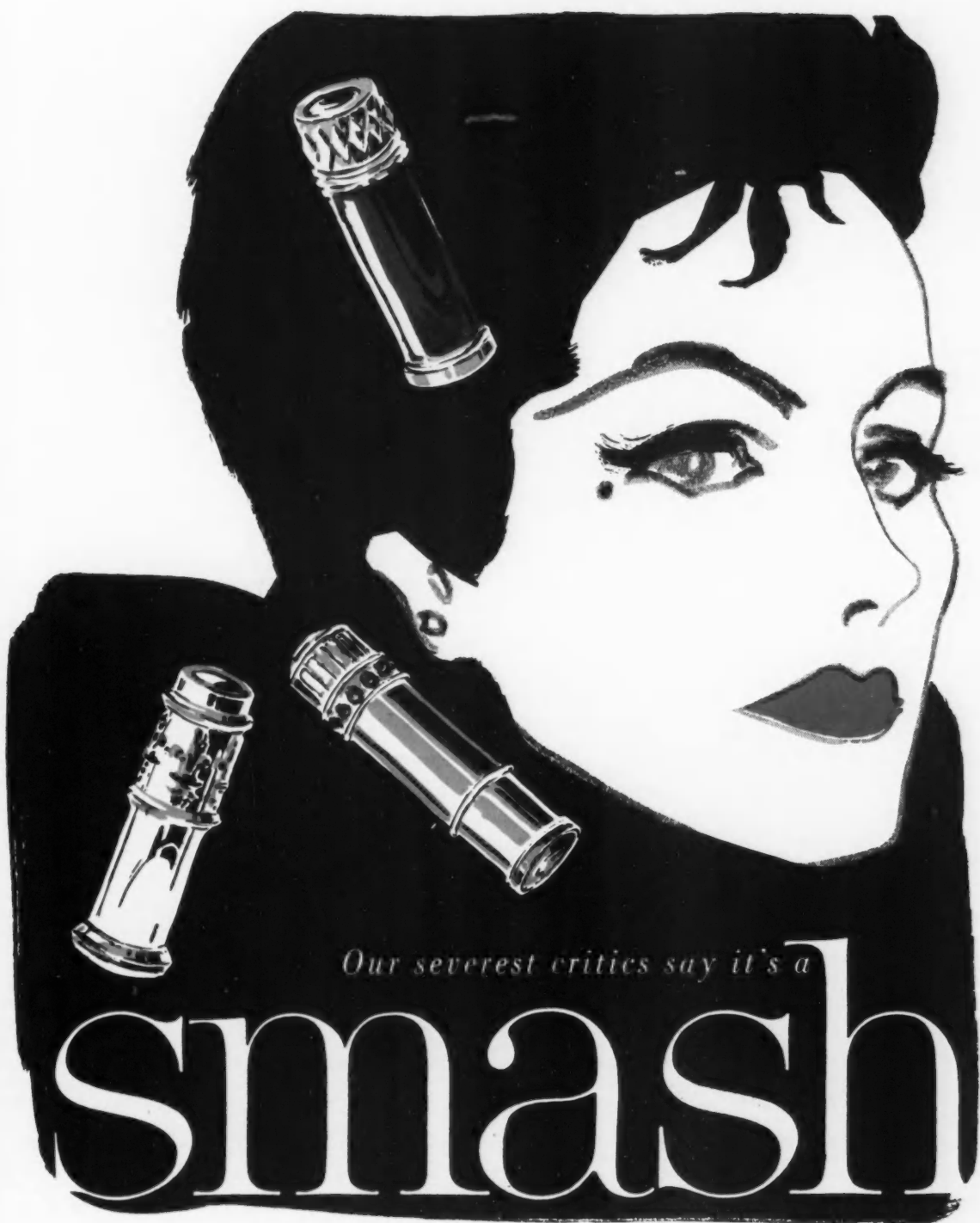
|                          |                    |
|--------------------------|--------------------|
| Oil of cassia, rectified | 3.0 per cent       |
| Alcohol                  | .....50.0 per cent |
| Glycerine                | .....6.0 per cent  |
| Water                    | .....41.0 per cent |

#### Artificial Flavors

Glycerine's efficiency as a solvent, coupled with its ability to blend and lend smoothness to flavor mixtures, makes it a valuable component of artificial flavors. Of many available formulas for making such compositions, the following<sup>14</sup> for a Concord grape type artificial fruit oil is typical:

|                        |                 |
|------------------------|-----------------|
| Benzyl butyrate        | .....10.5 parts |
| Methyl anthranilate    | ..4.5 parts     |
| Methyl salicylate      | .....0.5 part   |
| Amyl valerianate       | .....0.5 parts  |
| Fluid extract valerian | ..3.0 parts     |
| Alcohol (188 proof)    | ...150.0 parts  |
| Port wine              | .....75.0 parts |
| Grape juice            | .....50.0 parts |
| Glycerine              | .....25.0 parts |
| Color                  | .....sufficient |

Artificial compositions of this type are used to formulate flavoring products for industrial and home use. Belanger<sup>8</sup> shows how such compositions may be incorporated in glycerine-containing vehicles to prepare ready-to-use flavors. Thus, if desired, household flavors may be prepared by compounding the artificial fruit oils with a pure fruit base, as in the following formula:



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Buyers in many of the leading cosmetic houses are going theatrical about our latest lipstick container work—calling it a smash! We now offer any type of design and decoration, including engine turning and brocading, and enamel combinations up to three colors. Any large volume can be handled.

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**SCOVILL**  
Containers

Artificial fruit oil .....6-8 oz.  
 Fruit juice, pure ..... 8 oz.  
 Glycerine ..... 8 oz.  
 Alcohol ..... 5 pt.  
 Water, to make ..... 1 gal.

Mix the fruit oil with the alcohol, add the glycerine, mix well. Add the fruit juice and mix again. Finally add the water. Filter clear after standing for one day and color to suit with certified food color.

Alternately, the artificial oil may be used alone to impart the required taste to the flavoring compound, as in the following:

Artificial fruit oil ..... 2-6 oz.  
 Alcohol ..... 16 oz.  
 Glycerine ..... 4 oz.  
 Water, to make ..... 24 oz.  
 Certified food color .... sufficient

Dissolve the fruit oil in about half the alcohol, add the glycerine, mix well and add water until the solution begins to cloud. Then add alcohol to clear it up. Water and alcohol may be used alternately until the required volume of finished product is obtained.

#### Emulsion Types

Glycerine too has contributed materially to the acceptance and success of emulsion type flavors. Originally introduced in an effort to find substitutes for alcoholic flavoring extracts, they are now recognized on their own merits.

The baking, beverage, ice cream and confectionery industries have long been large users of emulsion type flavors. The baking trade, for instance, is a large user of vanilla, orange, lemon and almond flavors<sup>12</sup> while orange, cola, and root beer are examples of this type of glycerine-containing flavor used by the soft drink industry<sup>13</sup>.

Emulsion flavors are prepared by homogenizing essential oils and water with the aid of suitable emulsifying agents. Glycerine is added to such products to impart smoothness, facilitate dispersion of the oil, prevent loss of volatile constituents and in some cases, to prevent freezing during shipment and storage. In addition, the hygroscopic action of glycerine helps to prevent drying and skinning<sup>14</sup>.

Glycerine works well with various types of emulsifying agents. Particularly noteworthy, however, is its long-continued use with vegetable gums, the original emulsifiers for making emulsion flavors. In discussing such products, Jacobs<sup>15</sup> cites the following formula as typical of compositions based on water-soluble gums as the emulsifiers:

Gum acacia .....4 parts  
 Lemon oil .....8 parts  
 Glycerine .....4 parts  
 Water .....4 parts

Place the finely powdered acacia in a dry vessel, add the oil and triturate

thoroughly. Mix the glycerine and water and add to the gum and oil mixture. Gentle stirring suffices to make an emulsion.

Flavor manufacturers recognize the advantages of using glycerine in emulsion formulations based on their own specialties. One producer of water-soluble spice compositions made from essential oils and oleoresins, for example, recommends the following procedure for making bakers' emulsion flavors:

Flavoring agent (Spiceolate) 8 oz.  
 Water (100° F.) ..... 6 oz.

Mix and shake well. Make a base by mixing:

Gum karaya ..... 2 oz.  
 Glycerine ..... 32 oz.  
 Water (100° F.) ..... 5-6 pt.

Allow the gum to swell and stir in the Spiceolate and water mixture to yield about one gallon of emulsion.

#### Paste Formulations

Glycerine also has a well established place in the production of flavoring pastes. Offering the advantages of low cost and convenience, such preparations have been found particularly suitable for bakery products and confectionery. Glycerine and sugar or sugar syrup have long been used as the principal non-flavor components of flavor pastes and, despite the introduction of other materials, they still hold a prominent position in their formulation.

A general method of preparing flavor pastes is to dissolve the required amount of flavor material in glycerine and then add an equivalent amount of syrup<sup>16</sup>. Another simple general procedure is to add enough glycerine to flavor powder to make a paste. Color can be added with the glycerine or syrup, as desired.

It is obvious from the foregoing that glycerine's versatility and adaptability have found acceptance in the field of flavor manufacture. Flavor formulators know that glycerine remains one of their most valuable raw materials, one that continues to contribute to better flavor compositions.

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#### Flavors Overlooked In Brand Surveys

A SURVEY must make a selection of questions and the surveyors usually choose those which seem to be of greatest interest to the advertisers. Certainly, with studies that delve into brand favorites, place of purchase, how much one pays, and how many times a year one buys, there is little left to complain about. Nevertheless, we have missed in these studies any questions pertaining to flavor preference. One survey among the subscribers to *Capper's Farmer* asks whether these people buy packaged powders for puddings, packaged mix for ice cream, packaged ice cream, and many other products, and when these queries are answered in the affirmative, the next question is: which brand? Why not which flavor? Not that brand preference is of lesser interest, but flavor preference is likewise of great importance.

#### Taste Testing Is Subject of Meeting

A joint meeting of the American Statistical Assn. and the Biometric Society was held at the Biltmore Hotel in New York City in December, on the subject of taste testing. Prof. H. O. Hartley of Iowa State College was chairman. Among the papers presented were "Response Relations in Pair-Ranking Taste Experiments" by J. W. Hopkins and N. T. Gridgeman of the National Research Council of Canada, and "Three Useful Designs in Taste-Testing" by G. E. Ferris of Cornell University. Present at the conference were many representatives from various parts of the United States and from a number of foreign countries, among whom were: Dr. Stanley Ames, Distillation Products, Inc.; Dr. B. Oser, Food Research Laboratories; Dr. Victor G. Fourman, Syntomatic Corp.; Charles C. Krause, Procter and Gamble; and Dr. Carmen N. Mangieri of Hoffman-La Roche.

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DREYER



# S Y R M I S

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An exquisite fragrance for perfume, cologne, powders and sachets . . . warm, rich, lasting.

Extensive consumer tests place Syrmis in the top brackets for universal appeal on the American market.

We shall gladly send you a sample so that you may test and try Syrmis; we know that you will be gratified with the results.

\$20.00 the lb. or \$1.50 the trial oz.

Syrmis "C" for creams and lotions . . . that this memorable fragrance may enhance your toilet preparations also.

\$14.00 the lb. or \$1.25 the trial oz.

•

## COMPAGNIE PARENTO

INCORPORATED

C R O T O N · O N · H U D S O N , N E W Y O R K

NEW YORK    DETROIT    CHICAGO

COMPAGNIE PARENTO, LTD.

TORONTO    MONTREAL

# VERONOL

## AN ALDEHYDE

### Typical Specifications:

|                                       |  |
|---------------------------------------|--|
| PHYSICAL APPEARANCE:                  | Light yellow liquid.   |
| ODOR TYPE:                            | Aldehydic; suggestive of a mixture of higher aliphatic aldehydes.  |
| SOLUBILITY:                           | 10 parts soluble in 100 parts 80% Ethyl Alcohol.   |
| STABILITY:                            | Stable in soaps, cosmetics and perfumes.   |
| REFRACTIVE INDEX $n_{\frac{20}{D}}$ : | 1.4525   |
| SPECIFIC GRAVITY $\frac{20}{20}$ :    | 0.8500   |
| SUGGESTED USES:                       | As an ALDEHYDE TOP NOTE . . . 1/10 to 1/2%. <i>Extremely powerful</i> , it is an interesting addition to existing fragrances to add life and improve character of bouquet. |
| QUALITY:                              | Highly purified for use in fine perfumes. Held to rigorous specifications by our control laboratory.   |

*Note these additional VERONA specialties*

ROSANOL • FLORANOL • RESEDALIA  
CYCLAMAL • FLOWER OIL WHITE LILAC

Sole representatives in the United States for: J. & E. SOZIO, GRASSE, FRANCE

RESINOIDES • NATURAL ABSOLUTES • ESSENTIAL OILS

**VERONA**

**PRODUCTS BUILD SALES FOR** *Your* **PRODUCTS**

Aromatics Division

VERONA CHEMICAL COMPANY

Plant and Main Office: 26 Verona Avenue, Newark, N. J.  
1210 Rosedale Avenue, Chicago, Ill.

# WELL . . . WHAT DO YOU THINK OF IT?

*Now that you've had an opportunity to go through the new American Perfumer & Aromatics, you've probably formed some opinions about it. We'd certainly be interested in hearing your thoughts, because after all, we made the changes to satisfy you.*

*If you have any criticisms or suggestions—good or bad—about any or all features, please let us know. If there's a particular item you like best (or least) . . . or something on which you'd like to see more (or less) emphasis, won't you drop us a line? Thanks a lot.*

• THE EDITORS

**American Perfumer  
and AROMATICS**

• 48 West 38 St.  
New York 18, NY

## I-Quiz

*This Month's Quiz Master*

Dr. Emil G. Klarmann



**Question I.** *The application of a sunburn preventive cuts down the intensity of ultraviolet radiation reaching the skin; as a result, the skin gradually acquires a resistance to burning. What are the factors involved in developing this resistance?*

**Answer:** The primary protective effect is thickening of the corneous layer of the epidermis; since the corneum is quite opaque to ultraviolet radiation, a moderate increase in its thickness will markedly increase its opacity. Tanning also contributes toward protection against burning, but only at a later stage when the pigment granules which are formed originally in the basal layer have migrated outward and have reached the corneous layer.

**Question II.** *Correctly formulated hormone cosmetics are claimed to make an older face look younger. Upon what effect is this claim based?*

**Answer:** As a result of absorption of estrogen, microscopically demonstrable changes take place in the epidermis as well as in the lower strata of the skin. In the former, there is an increase in the number of both cells and cell layers, also a normalization of the excessive keratinization typical of the senile skin. In the cutis, the fragmentation and degeneration of elastic fibrils is halted and a more normal appearance is restored; there is also evidence for a greater imbibition by collagen of tissue fluids. All this should have the effect of making lines and wrinkles appear shallower; hence the skin will look plumper, smoother and therefore "younger."

The I-Quiz is a new feature for AMERICAN PERFUMER & AROMATICS designed especially for reader participation. We hope you'll test your technical knowledge of the cosmetics and flavor fields on this page—and we also hope you'll help test others. If you know unusual and informative facts about the chemistry of perfumes, cosmetics, flavors and soaps, why not pose them as questions? Mail them with the correct answers to AMERICAN PERFUMER & AROMATICS, 48 West 38th St., New York 18, New York, and you can be next month's quiz master.

## Impress Trade Mark on Public

**A** TOP industrial designer, the creator of Socony Oil Co.'s Flying Red Horse emblem, urged manufacturers to use every possible means to impress their trademarks on the public.

Speaking at a meeting of the Society of Industrial Packaging and Materials Handling Engineers, Jim Nash, of Jim Nash Industrial Designers, New York, said that trademarks are becoming more and more important as buying is speeded up and the market becomes more complex.

Mr. Nash pointed out that trademarks have five jobs to do for their products:

They must:

1. Assist in catching consumer attention.
2. Furnish strong brand identification among many packages.
3. Instill confidence in products because salesmen are no longer closely associated with them.
4. Give complex product lines a family resemblance.
5. Tie all the advertising together at the point of purchase.

He urges that trademarks be designed to reproduce well in all advertising media, and suggested that many familiar old marks are losing sales for companies because they are not adaptable to all media.

"A good new mark, being more highly visible, will gain month by month," he assured the manufacturer who resists giving up the old one in fear of losing ground.

Mr. Nash suggested several rules for judging a good trademark. Among them were:

1. Don't use overworked geometric shapes as the major design.
2. Don't rely on color for legal protection.
3. Make the mark interesting, individual and pictorial.
4. Use strong design rather than color for memory value.
5. Try to have a mark that can be thought of and described in a few words.
6. Design the mark so that it can be printed easily in b&w and various color combinations and on various surfaces.

## Overcoming Obstacles

**H**UMAN nature is so constituted that the majority of men can proceed only so far against obstacles. The limit of average endurance is a known quantity in every human activity. Success is achieved by those who beat this limit by extremely small margins.

What most of us do not perceive is that an additional ounce of energy at the final breaking point will distinguish us from thousands or millions of ordinary human beings.

This is the reason why sports are so important. In athletics young men learn that victory is usually achieved by an amazingly slight advantage—by a yard in a mile race. Life is competitive. Those who go in for sports realize this.

The desire to improve is the cause of all growth. Plant life represents security. Animal life represents the

spirit of adventure, the willingness to take a chance. This spirit ruled the ancestors of man; that is the reason why we are here today.

The adventurous individual will go ahead when every nerve in his body is crying to quit—*William Feather*.

## Mass Selling

**E**VERY manufacturer must spread the news about his products—quickly, effectively and inexpensively. One customer telling another is too slow states the Bankers Trust Co. in a recent advertisement.

"Mass selling is the only way to stimulate mass demand. Advertising is simply mass selling that paves the way for salesmen. Through advertising, businesses tell millions about their products and services for a fraction of a penny for each person reached.

"Lives are enriched by advertising which stimulates 'wanting,' generates new ideas, speeds development and acceptance of new products, creates new jobs. . . . Business invests \$9 billion annually in advertising. . . . When millions respond by buying, production can be increased, economies effected, and prices reduced. This productive circle maintains the free market in which the American consumer enjoys the finest selection of goods and services on the earth."

## Discount House Sales Rising

**S**TEPHEN MASTERS, a New York discount house operator who believes implicitly in the discount house system says:

1. There are now about 10,000 discount houses in the country, doing a total volume of \$500,000,000 a year.

2. His own house, in New York, does an annual volume of \$20,000,000, or an average of \$40 per customer.

3. Masters sells \$700 worth of merchandise per square foot, compared to \$76 per square foot for the average department store.

Masters rings up \$100 worth of sales at a total cost of \$11.20, while it costs the department or specialty store \$32.90 to sell \$100 worth of goods.

He charges that the current clamor over the spread of the discount house is similar to the storms of protest which arose over the rise of the department store, chain store system, house-to-house selling, supermarket and mail order house.

"The agitation against the discount operator today is far from the same brush," he said.

In fact, Mr. Masters told utility men, they were actually "the first discounters." He pointed out that when Edison perfected the light bulb, electricity was sold for 25¢ a kilowatt.

"Electricity was used for street, factory and home lighting," he said. "That was the night load. Utilities needed day load to have full pay load. The answer was to sell kilowatts cheaper and create a market for daytime appliances that would consume more kilowatts.

"That has been the procedure for 75 years. The kilowatt today costs the consumer about 1.7¢," he said.



DO YOU  
LIKE THIS  
FEATURE?

We have in mind running similar "nose testers" three or four times a year, based on the assumption they possess wide enough reader-ap-  
peal to justify the time, space and effort.

However, active reader participation in this game of "sniff and tell" is necessary to the continuance of such a feature.

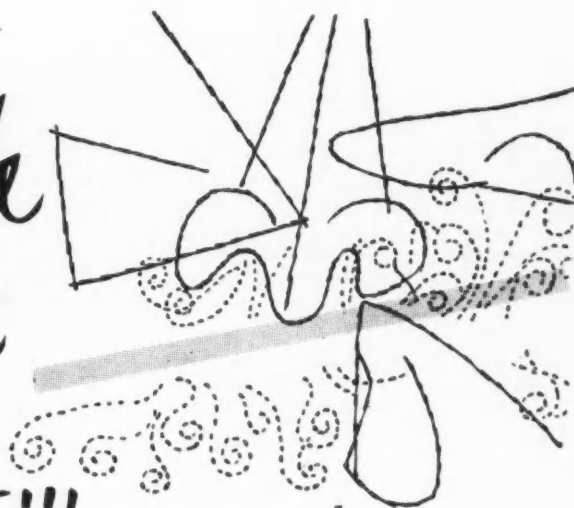
So won't you please indicate your opinion by checking one of the squares below and re-  
turning the coupon to us.

☐ I like it!

☐ I don't!

THE

# Battle of the Noses...



## OLFACTORY CLASSIC OPEN TO ALL

No rules, regulations or package tops. No jingles, judges or prizes; no, not even a modicum of glory attaches itself to this epic struggle of the noses.

No noses are barred, regardless of how sensitive or noble. All you have to do is to put your nose to it. Then name this famous perfume.

But we would like to keep a score of the hits and misses. So join the fun by using the coupon to enter the perceptiveness of your nose. Win the satisfaction of knowing your nose told you so!

The perfume used in scenting the blotter will be identified in the February issue.



Score Keeper,  
BATTLE OF THE NOSES,  
AMERICAN PERFUMER & AROMATICS  
48 W. 38TH STREET • NEW YORK 18, N.Y.

Having put my nose to it, I'd say the January blotter is per-  
fumed with:

.....  
(fill in the name of the perfume)

SIGNED \_\_\_\_\_



Albert Verley and Company's

## Nicotinia Verley ... imparts the sales appeal of a sweet, powerful, slightly pungent note

**\$36** a pound

The sweetness of Jasmin, Tuberose, Carnations, and Roses — with just a bit of the pungency of Narcisse — that's Nicotinia Verley. It reminds one of the early-morning fragrance of "Sweet Tobacco", the old-fashioned American garden favorite — Nicotinia Assimis, they call it now.

Leading perfumers have found that Nicotinia Verley provides exciting effects when used as a blender in floral bouquets and exotic compositions — or used alone in powders, creams, lotions, and other toilet preparations.

Discover the possibilities of Nicotinia Verley lending a distinctive floral character to some of *your* formulas. Write today for a working sample.

Where Your Dollars Have More Scents

## *Albert Verley* and Company

Headquarters for Fragrance Appeal

**ALBERT VERLEY & COMPANY**

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# Packaging and Promotion

## 1. SIMONETTA

Incanto Cologne is the offering from Simonetta, Italian couturier, to complement her Incanto perfume. It is bottled in a fluted glass column, the base formed by the bottom of the box and the cap by the bottle-cap. The box is white with black label. The cologne costs \$5 for 3 ounces, \$7.50 for 6 ounces.

## 2. STRATAFOAM

Stratafoam soap, a new product offered by Stratafoam Corp., is claimed to be unique in that it is a liquid composition which turns to foam upon agitation and remains in a foam state for a considerable period of time. The soap, to be used on face, hands and body, is packaged in a plastic squeeze container. The producer reports unusual economy for the product, saying that the 3 ounce plastic dispenser with one extra refill ordinarily lasts the average family about 2 months. An economy pint size retails at 89¢.

## 3. HELENA RUBINSTEIN

The Young Look is a new lipstick by Helena Rubinstein. The special winter formula creamy texture is said to protect lips against low temperatures and winter winds. The lipstick is available in 12 colors. Retail price is \$1.25.

## 4. RICHARD HUDNUT

Lotion Superbe is a new lotion by DuBarry for use on the hands and body. The formula, said to be based on extensive research of dermatological and therapeutic needs, contains silicones, allantoin, humectants, cholesterol and emollient oils. The manufacturer claims that the lotion neutralizes the effects of harsh materials, and is completely non-alkaline and free of harmful soaps. The large introductory size, regularly priced at \$1.75, is offered at \$1.10 plus tax.



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## 5. HOUBIGANT

Quelques Fleurs hand lotion by Houbigant, Inc. is available at a price of \$1.50 plus tax for the \$2 value. The bottle comes with a fingertip dispenser which releases the amount necessary for application. The lotion contains allantoin, which is said to stimulate the formation of new skin tissue and to heal scratched, cut, cracked or chapped hands.

## 6. LENTHERIC

Tweed perfumed spray hair net is the new product from Lenthéric. It is scented with the Tweed fragrance, and contains liquid lanolin, which is said to prevent dryness and brittleness. The product is packaged in a glass bottle covered with a plastic coating of aquamarine blue with brown lettering. The top is of clear plastic with the matching blue spray attachment visible underneath. The packaging is of the low aerosol pressure type, which is claimed not to blow or muss the hair. Retail price is \$1.50 plus tax. A counter display unit of 6 bottles is available.

## 7. COTY

The perfume lock atomizer by Coty is offered as the best way to apply perfume, and to safeguard it. A permanently fixed gold metal cap at the top of the bottle has a rotating bulb attached. Set with the arm down to one side, the flacon is in lock position, which is said to seal the contents against leakage and evaporation. The atomizer is offered with 13 Coty fragrances: L'Origan, L'Aimant, Paris, Emeraude, Styx, Asuma, Muguet des Bois, LaRose, Chypre, Meteor, Accomplie, Muse, and LeVertige. The price is \$6.50 for 1/2 ounce, \$12.50 for 1 ounce.





\* **Geranidar**

...when the cost of geranium  
goes up, the value of an  
excellent replacement is more  
important than ever... **Geranidar**  
is just such a replacement...

...the odor, value, character  
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been time-tested for years.

Write on your letterhead  
for samples and suggestions.

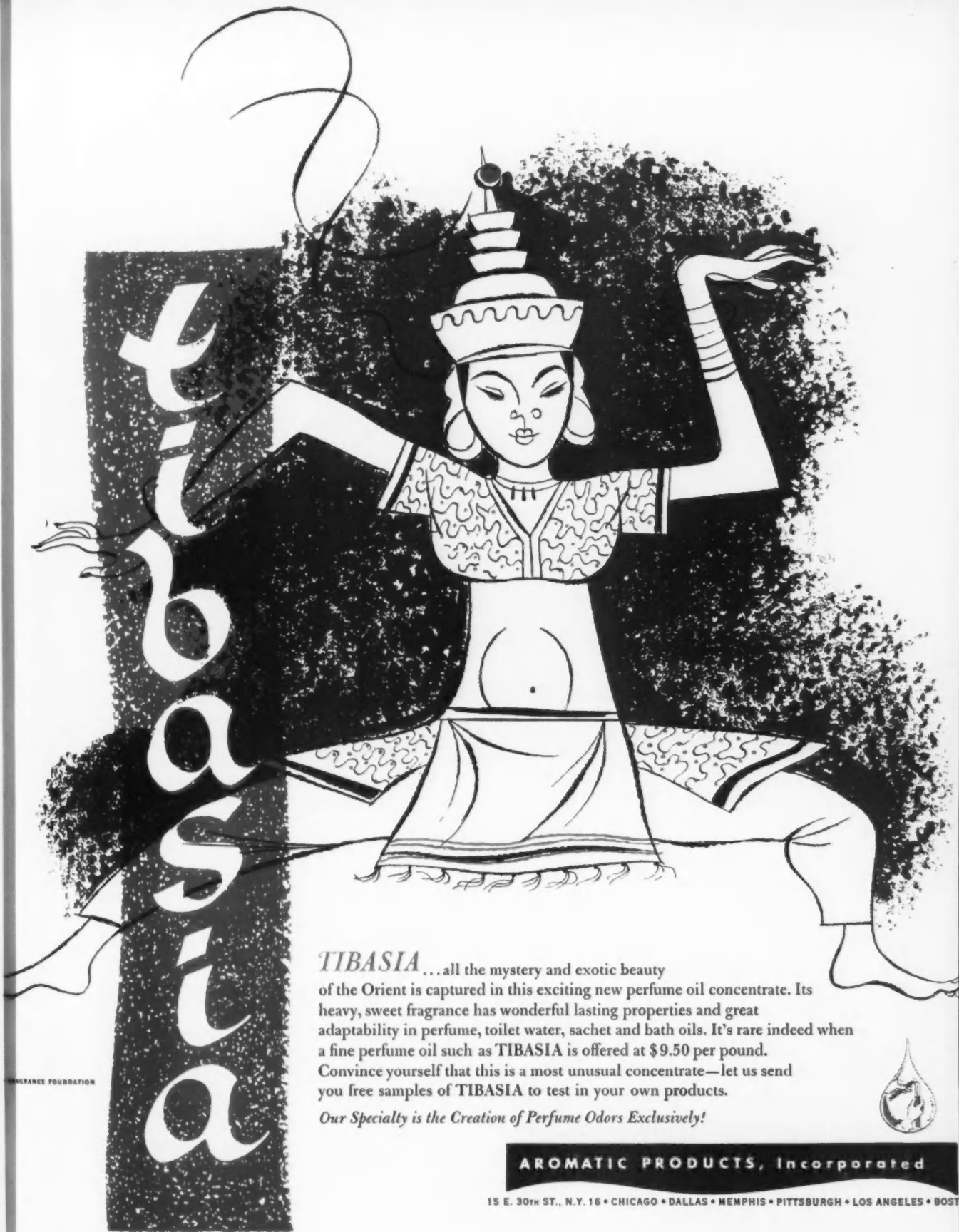
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**TIBASIA** ...all the mystery and exotic beauty of the Orient is captured in this exciting new perfume oil concentrate. Its heavy, sweet fragrance has wonderful lasting properties and great adaptability in perfume, toilet water, sachet and bath oils. It's rare indeed when a fine perfume oil such as TIBASIA is offered at \$9.50 per pound. Convince yourself that this is a most unusual concentrate—let us send you free samples of TIBASIA to test in your own products.

*Our Specialty is the Creation of Perfume Odors Exclusively!*

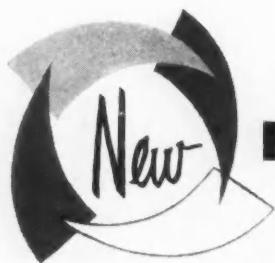


**AROMATIC PRODUCTS, Incorporated**

15 E. 30TH ST., N.Y. 16 • CHICAGO • DALLAS • MEMPHIS • PITTSBURGH • LOS ANGELES • BOSTON

PERFUME OIL CONCENTRATE FOR PERFUME, TOILET WATER, SACHET, BATH OIL





## PRODUCTS & IDEAS

### PORTABLE ACID PUMP—1

A portable electric acid pump which transfers acids from open vessels as well as standard carboys and drums is produced by the General Scientific Equipment Co. It is said to be completely self-draining, providing absolute operator safety. The pump is driven by an entirely enclosed electric motor, and is designed to deliver a steady spurt-free flow of acid at the rate of approximately 6 gallons a minute. It is furnished in materials suitable for the particular acid service specified.

### SMELLING STRIP HOLDER—2

N. V. Chemische Fabriek "Naarden" has designed a new smelling strip holder. It holds a comparatively large number of strips simultaneously, offering greater convenience for the user.

### FILLING MACHINE—3

A machine said to offer quick, easy change in filling various types of bottles, jar or plastic containers in different sizes is manufactured by the F. L. Burt Co. The automatic Simplex Model T filler feeds the bottles directly to a capper, or if the container is labeled, to a labeling machine. It dispenses at a rate of from 30 to

60 containers per minute, has acid-resistant contact parts, and deposits from 4 ounces to quarts of a liquid or semi-solid. The manufacturer states that it can be dismantled in less than 5 minutes for cleaning.

### ELECTRO-STOPSWITCH

The Fisher Scientific Co. announces an Electro-Stopswitch, an electric shut-off timer for precisely regulated operations. The instrument, which is 4" x 4" x 4", is available in 60 minute or 24 hour models, and can be used for any fraction of these maximum periods. After use with one instrument, the stopswitch is said to be easily attached and used with another.

### IODINE PREPARATION

The Onyx Oil & Chemical Co. announces a product for the preparation of iodine germicides of the iodophor type. Idonyx is a concentrated source of iodine which also contains non-ionic surface active agent and phosphate salts. The manufacturer says that it is a fine, free-flowing powder that is non-irritating, non-corrosive and chemically stable on long storage. It was designed for compounders and formulators of sanitary chemical products.

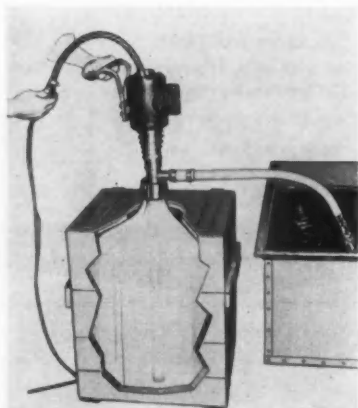
### SAFETY STOPPERS

A new line of safety rubber stoppers, which permit easy insertion of thermometers, glassware or tubing, is being produced by Fisher Scientific Co. One-hole and two-hole stoppers are available. Although the holes have been enlarged, the stoppers retain their sealing properties because insertion into the vessel compresses the rubber around the thermometer. Also available are sulphur-free blue stoppers, which are compounded and vulcanized so that they cannot evolve free sulphur when used, and thus are helpful for sulphur determinations.

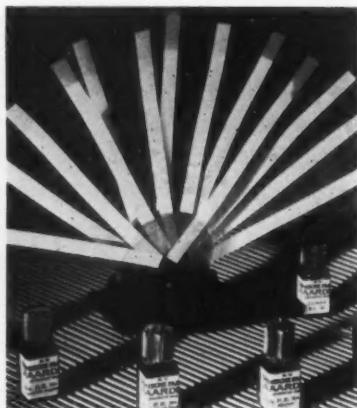
### SPECTROGRAPH

The North American Philips Co., Inc., announces the Norelco Autrometer, multi-element indexing X-Ray spectrograph, which covers a range of 71 elements in the atomic scale and gives percentages of as many as 24 in a specimen. The manufacturer says that program selectors are provided for the indexing positions so that data on individual elements may be obtained in sequential order. Any one or more of the positions may be by-passed in an analysis operation by switching off the proper selectors. All operations are handled from a console desk.

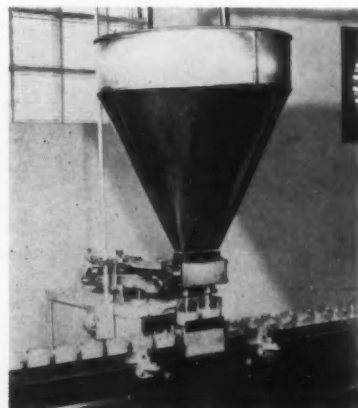
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Let Avon set the stage for your Private Brands of Cosmetics and Toiletries. Your products will be produced with strict adherence to the formulae you desire . . . and be packaged precisely as you wish. Avon's specialized knowledge and experience, developed over the past 69 years, is your assurance of quality in every phase of cosmetic and toiletry production.

Call or write Avon for complete information concerning the production of your own brands of toiletries and cosmetics.

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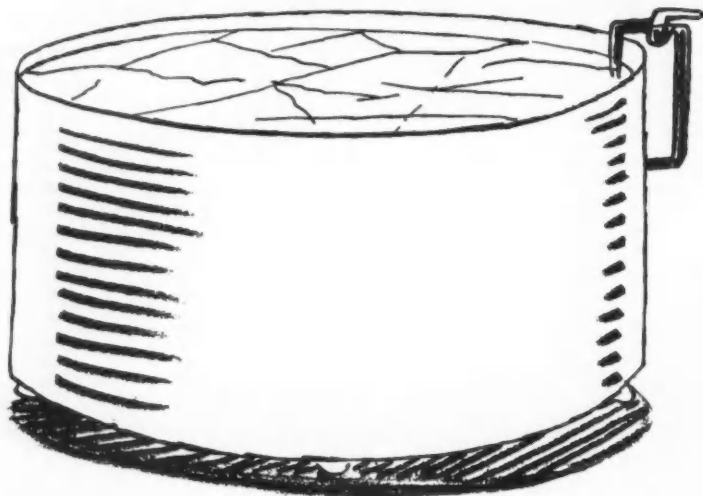
STRATEGICALLY LOCATED LABORATORIES IN SUFFERN, NEW YORK • PASADENA, CALIFORNIA • MONTREAL, CANADA

& Aromatics

January, 1956 75



## SOAP SECTION



### Re-Using Scrap Soap

PAUL I. SMITH



**EVERY** soap manufacturer is faced with the problem of utilizing soap scrap, and, in spite of rigorous efforts to reduce the amount of scrap produced by leaky plant and careless handling, something like 1-2% accumulates in one form or another and has to be converted into some marketable form. It certainly does present quite a serious problem. Only a small percentage of scrap can be re-milled with the regular make of soap, as it tends to darken and coarsen the production run and impair the homogeneity of the adulterated soap. One safe way to deal with scrap is to re-melt it in a kettle specially reserved for this purpose. It is usually advocated that about 5% water be added and sufficient soda ash to saponify any free fatty acids present. Another method is to make a special grade of soap to which a large percentage of scrap is added along with the fatty ingredients. By careful re-working, scrap soap can, without marked signs of deterioration, be made suitable for re-sale. Here are some precautions to observe when considering the problem of re-using scrap soap:

1. The scrap must not be allowed

to become contaminated with dust and grit. If it is contaminated, then it needs to be re-melted and filtered before processing.

2. Scrap from toilet soap should be kept apart from scrap obtained from household or special soaps.

3. Scrap must never be allowed to remain in contact with hot surfaces, such as kettles and steam pipes, otherwise marked deterioration both of colour and odour will take place.

4. Very old and hard scrap should not be added to new scrap, but worked separately.

#### Popularity of Pine Oil For Household Soaps

PINE oil is consistently popular because of its clean refreshing fragrance, useful antiseptic properties and ability to improve the detergency rating of soaps. Added to these practical advantages is the fact that pine oil mixes easily with soap ingredients and is economical to handle. These are important factors that impress the soap manufacturer and in addition he is impressed with the following points:

1. Pine oils do not discolour soaps

or stain fine white fabrics.

2. They are readily available from indigenous raw materials.

3. Natural aromatic detergents have a bigger selling pull than synthetics.

4. Quality is consistent from bulk suppliers.

#### Choice of Oleic Acid Influences Quality of Soap

INCREASED importance is being attached to the presence of linoleic acid in oleic acid used by soapers, as researchers have found that this impurity has a marked deteriorating effect on the quality of soap and specialty products. Polyunsaturated acids, such as linoleic acid, are subject to oxidation much more readily than the mono-unsaturated acids like oleic acid. Alongside with low resistance to oxidation is poor colour and odour stability and susceptibility to rancidity changes. By employing advanced processing techniques, it is now possible to ensure a high quality oleic acid with less than 3.5% polyunsaturated acids. Although the price charged for these special grades is slightly more than the regular double-distilled grades, the high

## AEROSOL SERVICE

---

A scientific approach

*Perfuming Aerosols is a science in itself. It requires a profound knowledge of all Aerosol items. Propellant, container, active ingredient and perfume form a complexity of interactions, which together determine the quality of the final product.*

*A special research unit studied this complete subject intensively.*

*Make use of this scientific background and consult the Aerosol Research Laboratory of Polak & Schwarz. This will ensure a strict and accurate solution of all Aerosol problems.*



**POLAK & SCHWARZ**

**POLAK & SCHWARZ INCORPORATED • 677 WASHINGTON ST., NEW YORK 14, N. Y.**

## SOAP SECTION

quality of the acid makes it a first choice for premium soap products, including odourless shampoos.

### Glycerine Helps In Soldering Stainless Steel

A recent article offers this tip to anyone faced with the problem of soldering stainless steel: add one teaspoon of glycerine to each cup of stainless soldering flux. The glycerine overcomes the tendency of the flux to stand up in drops on the smooth surface of the stainless steel.

### Mansure to Tell How to Do Business with Government

The head of the government's General Services Administration, Hon. Edmund F. Mansure, will speak at the Soap Industry Convention at the Waldorf-Astoria, New York, on Thursday, January 26. Among its other responsibilities, the G.S.A. acts as "the biggest housekeeper in the world" for U. S. government buildings in Washington and throughout the country. Mr. Mansure's topic will be "How to Do Business With Your Government."

### Stuart Sherman Now Advertising Director for Colgate-Palmolive

Stuart Sherman became advertising director of the Colgate-Palmolive Co. January 1. He has been a



Stuart Sherman

director of the company and a member of the Executive Committee since 1948. He is an alumnus of Williams College and has had much experience in sales work with the company and with a large advertising agency in Chicago. He also established the advertising firm of Sherman & Marquette.

## SOAP ABSTRACTS

### Lanolin In Powdered Hand Soaps.

R. Bernstein, M. Haftel and R. Grant (Philadelphia Naval Shipyard, Pa.). Soap and Chem. Specialties 30, No. 11, 48-9, 106(1954).—A Soxhlet extn. procedure permitted easy and quant. sepn. of lanolin from soap and vegetable abrasive and avoided erratic and tedious extn. of lanolin and fatty acid from acidified solns. Contg. insol. vegetable abrasive. For soaps contg. cornmeal 55, powd. laundry soap 42, and lanolin 3% corrections are made for the detd. lanolin. These are 0.1% for lanolin from corn cob and 0.3-0.4% from soap. Thru C. A. 49, 647b

### Absorption of Soap on the Skin.

A. G. Ramsay and K. K. Jones (Northwestern Univ., Med. School, Chicago, Ill.). Brit. J. Dermatol. 67, 1-4(1955). Samples of skin fat were obtained 1-3 hrs. after the last 3 washings daily with either water, soap and water, or alcohol, with rinsing and drying after each wash. The fat was determined by the monolayer method and the skin-fat factor ( $\gamma$  fatty substance/spread, in sq. in.) was calculated. The factor for the soap-and-water wash was significantly lower than for the water or alcohol washes. Skin pH fell from 7.75 to 5.0 in 25 minutes after washing with pure Na oleate, and the skin-fat sample taken after such a wash was the same as that of oleic acid. It is probable that soap is absorbed on the skin and hydrolyzed by the skin acidity. (C.A. 49, 7614) Thru J. Am. Oil Chemists' Soc., 32, 467(1955).

### An All-Purpose Detergent Bar. D.

Brooks, Perfumery Essent. Oil Record. 46, 123-5(1955). A good all-purpose detergent bar must have good detergency on skin, fabrics, and hard surfaces in all kinds of water, good soap-like lathering qualities in all types of water, mildness on the skin, little or no tendency toward softening, crystallizing, and decomposition under ordinary use and storage conditions, pleasing appearance and odor, and the ability to be produced in standard soap-making equipment. Problems involved in manufacture and formulation to obtain a bar with these characteristics are discussed. Thru J. Am. Oil Chemists' Soc., 32, 468(1955).

**The Effect of Washing with Soap and with a Detergent on the 4-Hour Sebaceous Secretion in the Forehead.** J. E. Kirk and H. Effersoe (Washington Univ., St. Louis, Mo.). J. Invest. Dermatol. 22, 257-60(1954).—For a period of 4 weeks soap was used in washing, and for a second similar period a detergent consisting of a mixt. of Na alkyl sulfates and inorg. salts, chiefly  $\text{Na}_2\text{SO}_4$ . Lipides for examn. were then removed by washing with ether from a fixed area of the forehead. No significant difference was found in the amt. of ether-petr. ether-sol. material per sq. cm. of skin over 4 hrs. during the periods in which soap or detergent was used. Thru C. A. 49, 647g

**New Method for the Determination of Lathering Power.** J. P. Sisley and M. Loury. Rev. franc. corps gras 1, 390-5(1954).—A common elec. household mixer (type Turmix) was adapted to the measuring of lather by replacing the usual glass bowl by a tube graduated from 1 to 1000, and with whipping conditions of 30-sec. periods at 1200 r.p.m. For 5 min. the upper and the lower levels of the froth of 21 com. detergents at concn. of 0.05, 0.1, and 0.15% dissolved, resp., in distd. and tap water, were detd. and tabulated. The results are generally (exception, nekal) well comparable with those obtained with the less practical and cumbersome app. of Ross and Miles (C.A. 35, 4236<sup>1</sup>) Thru C. A. 49, 647h

**Liquid Shaving Preparation.** Ludwig C. Kelber. Ger. 825,118, Dec. 17, 1951 (Cl. 23e,2). Small amts. of urea (I) or I derivs. are added to shaving soaps from higher-mol. fatty substances to prevent solidification of the shaving soap without reducing the foaming properties. A suitable prepn. is obtained by treating a shaving soap contg. 15% of a (20:80) mixt. of coconut oil and tallow and possibly, disinfectants with 3% I. Thru C. A. 49, 650g

### Cologne Sticks and Related Products.

A. L. Fishbach, Soap, Perfumery and Cosmetics 27, 1041-4(1954).—Several formulations based on gelling of alc. with Na stearate are considered. App. for lab. or plant prepn. is reviewed. Analytical methods and calns. are examd. Thru C. A. 49, 1283d

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(Continued from page 39)



Nathan Fretz pauses to chat with Danute Pajaujis.

#### Selenium Sulfide As An Anti-Dandruff Agent

**S**ELENIUM sulfide, because of its close relationship to sulfur, has been for many years considered a possible agent for the treatment of dermatoses. It was finally found that an effective agent could be formulated by combining selenium sulfide with a hydrophilic agent and a detergent. This preparation, known as Selsun, controls a high percentage of cases of seborrheic dermatitis of the scalp, of which dandruff is a mild form, and of other areas such as the eyelid, nasolabial fold, and external ear canal. In a somewhat different form, known as Seleen, it is highly effective in certain nonspecific dermatoses of cats and dogs, and in the control of demodectic mange.

Just as the etiology of dandruff has not been established, so the actual mode of action of the selenium sulfide preparation is not known. Little evidence in recent years has been gathered to support the theory that dandruff is caused by the fungus *Pityrosporum ovale*. However, selenium sulfide suspensions have antifungal activity.

It has been suggested that selenium activates sulfur, and that it is the sulfur which is the effective anti-dandruff agent. This is an interesting theory. However, the action of selenium sulfide is not entirely that of elemental sulfur. In some patients treatment is followed by an increased oiliness of the skin, which does not occur with sulfur alone. As a result of this observation it has been suggested that selenium sulfide may act by correcting an abnormal skin fat condition.

Investigators have demonstrated a twofold effect of Selsun on sulfhydryl groups in human epidermis; the detergent releases previously non-reactive sulfhydryl groups, some of which are then inactivated by selenium sulfide. It is possible that these effects are related to the repression of scale formation in dandruff.—*Abstract of S.C.C. paper by Edward J. Matson.*

#### Sodium Sulfacetamide: A New Approach To The Therapy of Seborrhea Capitis and Seborrheic Dermatitis

**E**TIOLGY and clinical aspects of *seborrhea capitis* (dandruff) and *seborrheic dermatitis* of the scalp and other areas of the skin will be discussed. Evolution of medical terminologies categorizing the various stages of seborrhea as well as the role of micro-organisms as possible contributors to seborrheic eruptions will be presented. The clinical picture—developmental stages and pathological manifestations of *seborrhea capitis* and *seborrheic dermatitis*—will be described. Clinical results obtained with sodium sulfacetamide used topically in the

treatment of a large group of patients with *seborrhea capitis*, *seborrheic dermatitis*, or *bacterial cutaneous infections* will be reported.—*Abstract of S.C.C. paper by Arnold H. Gould.*

#### The Emerging Cosmetic Chemistry

**T**HIS paper represents an attempt to characterize cosmetic chemistry, in terms of the kinds of papers the Society has heard in the past, and in light of recent progress toward solution of some of our more important problems. The Society, in its first ten years, has had well-rounded programs, largely concerned with technological data. It is considered probably that future interest will turn increasingly toward more fundamental scientific subjects.

Selected topics of current interest to cosmetic chemists are treated as examples of the multitudinous branches of science and the varied disciplines which impinge upon cosmetic chemistry. Among the topics treated are:

- Composition and function of tissues
- Cellular function
- Enzyme mechanisms
- Protein structure and formation
- Allergic phenomena
- Structure and physiological activity
- Aging.

In each of these fields recent advances are cited to illustrate how general concepts and empirical data are being replaced by detailed knowledge of the chemical mechanisms involved. Such knowledge will be of immense value to cosmetic chemists in improving the efficacy of cosmetic products while their high standard of safety and attractiveness is maintained.—*Abstract of S.C.C. paper by Paul G. I. Lauffer.*

#### Review of Dandruff Research to Date

**P**ROBABLY no common disorder of the skin has been subjected to more controversy than dandruff. The controversy particularly concerns what role several organisms, especially *Pityrosporum ovale* plays in its cause; the complexity of terms employed in its designation; the relation of dandruff to seborrhea and to baldness.

What is dandruff? The term "dandruff" as well as terms designating seborrheic disorders are defined.

Discussion is made of *Pityrosporum ovale* and what role it plays in causing dandruff, the validity of positive results of inoculation of culture of the organism.

Discussion is made of modern concept of dandruff and seborrheic disorders. It is difficult to separate dandruff in discussion of the seborrheic state and its disorders. Discussion concerns hormonal influence, dietary and other influence, vitamin deficiency, estrogenic creams.

Time-honored preparations in treatment of dandruff are reviewed. What is their mechanism of beneficial action?

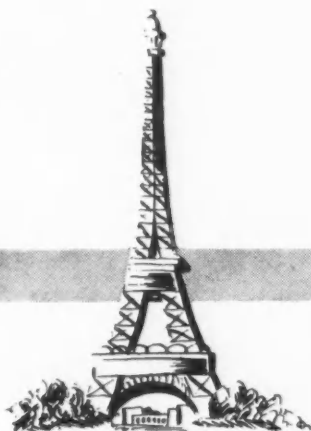
Newer remedies in treatment of dandruff are discussed. This embraces—(a) conventional long-used ingredients, (b) preparations allied to sulphur, selenium and tellurium, (c) quaternary ammonium compounds, (d) fungicides, (e) vitamin B components.

A method of evaluating efficacy of anti-dandruff preparations is presented.

Suggestions regarding formulation of new preparations in treatment of dandruff are discussed.—*Abstract of S.C.C. paper by Joseph V. Klauder.*

(Continued on page 82)

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(Continued from page 80)

#### Fatty Acids and Derivatives in Cosmetics

FATTY acids are used as building blocks to synthesize derivatives having specific physical and chemical properties for varied industrial uses. Chemical composition as well as the specific orientation and/or configuration of a given fatty molecule plays a major role in the properties of these synthesized esters.

Hard Butters manufactured by various techniques are described and are compared to cocoa butter demonstrating the flexibility and versatility of the tailor-made products over the naturally occurring fat. Oils of exceptional oxidative stability, fluidity at sub zero temperatures and even alcohol solubility in combination with the other desired characteristics can be achieved in fatty esters, illustrating the broad range of possibilities that exists in a field that is looked upon with passive interest.

The versatility of the fatty derivatives suggested should open many possibilities of application and use to the fertile mind of the cosmetic chemist.—*Abstract of S.C.C. paper by V. K. Babayan.*

#### Potential Utility of Ion Exchange Resins In Anti-Perspirant—Deodorant Formulations

THE purpose of this discussion is to describe briefly the important physical and chemical properties of a group of synthetic, insoluble polyelectrolytes commonly called ion exchange resins. With this information as background, the potential utility of such materials as active ingredients in anti-perspirant—deodorant combinations will be reviewed. For example, the selectivity of certain resins for fatty acids, ammonia, and other products of apocrine sweat will be outlined. Information will be supplied on the deodorizing properties of certain resin adsorbents as judged by laboratory and clinical studies. From these data and from the knowledge of the properties of various ion exchange materials, proposals will be offered on the ideal type of synthetic adsorbent for anti-perspirant—deodorant formulations.

Finally, the utility of these exchangers in other dermatological applications will be briefly outlined.—*Abstract of S.C.C. paper by J. C. Winters.*

(Continued from page 42)

#### Aerosol Spray Patterns

THE property that makes aerosol products unique as well as useful is the fact that they are self-propelled. By merely a flick of the finger a spray can be obtained. This spray can be characterized by the droplet size distribution, its area of coverage, its temperature, its wetness and liquid volume. The droplet size distribution is determined by the characteristics of the valve and button, the amount and type of propellant, the temperature and the viscosity and surface tension of the product. The area of coverage is defined by the angle projected by the spray and is dependent upon the design of the button. The temperature of the spray is determined by the amount and type of propellant used. Wetness of the spray is determined by the relative proportions of concentrate and propellant as well as the type of propellant which is used. The liquid volume delivered per unit is a function of the valve inner orifices.

Various techniques have been developed for measuring these characteristics. The liquid volume of the spray is perhaps the easiest to determine since it merely involves spraying for a period of time and determining the

amount of material dispensed. The measurement of droplet size distribution has received the most attention. A new dye technique has proven to be a valuable qualitative measurement of droplet size distribution as well as area of coverage. Spray temperatures have been measured accurately by means of a Thermistor instrument. The characteristics that are desired depend largely on the product and how it is used. It is possible to vary the spray characteristics by modifications in the formula, choice and amount of the propellant and selection of the valve and button.—*Abstract of T.G.A. paper by Morris J. Root.*

#### Tissue Culture Applications In Pharmacological Evaluations

SCIENTIFIC problems are sometimes left unsolved or are attacked the hard way because suitable techniques are not available. Tissue culture is available for a wide range of uses. It is no longer a sharply circumscribed technique, but can be used for week-long observation of a single cell or mass production of billions of cells of a pure strain.

First and foremost, tissue culture tells whether a substance can act on a particular cell or tissue, and reveals what the alterations are. The criteria of effect can be morphological or biochemical. Many isolated tissues retain specialized functions. Nerve will conduct impulses, heart will continue to beat, and glands will secrete. Some organs maintain their complete structure and even grow: embryonic bone, for example. Thus where the nature of an effect cannot be pin-pointed in the intact animal, it can sometimes be identified by its effect on isolated tissues. The special value of tissue culture becomes more obvious where metabolites must be traced. Hard-to-get fractions can be adequately tested in tissue cultures requiring a total medium of only a fraction of a milliliter.

The economy of tissue culture applies to the tissues as well. This is particularly valuable where we need to know the effect on human tissue without creating a hazard to the human being. Bits of tissue left over from surgery or biopsy can serve very well for in vitro testing. Being sterile, the cultures can be used for repeated tests.

Thus, tissue culture provides a simple approach to problems not easily answered by other means. It should be kept in the foreground of our thinking about pharmacological evaluation.—*Abstract of T.G.A. paper by Ivor Cornman.*

#### Measurement of Perspiration Activity

IN spite of the fact that perspiration and antiperspirants have been the subject of part of a Seminar Meeting recently, there is still need for discussion of the practical aspects of measuring antiperspirant activities from the cosmetic standpoint.

A number of methods using different principles have been proposed and used, most of them by medical research workers. A description of each major method is given and evaluated for possible cosmetic use.

The various factors which cause difficulties in perfect duplication of results are given under the heading of active ingredients, equipment and test objects.

Four experimental methods were studied in detail and the results indicate that qualitative results and trends can be established but that quantitative duplication of results can only be obtained by statistical analysis of many experiments.—*Abstract of T.G.A. paper by Otto Jacobi and Herbert Heinrich.*

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# News

## and Events

### Herbert Heinrich is Coty Cosmetic Research Director

Philip Cortney, president of Coty, Inc., announces the appointment of Dr. Herbert Heinrich as director of



Dr. Herbert Heinrich

the cosmetic research laboratories of Coty. Dr. Heinrich studied chemical engineering at the University of Berlin. He obtained an M.S. in Chemistry at Marquette University in 1927 and a Ph.D. in chemistry at the University of Wisconsin in 1929.

Dr. Heinrich is well known as a consultant in the cosmetic industry, and the author of a number of articles and patents on chemistry and cosmetic subjects.

### Warner-Lambert Inaugurates Lambert-Hudnut Division

The Warner-Lambert Pharmaceutical Co. has organized the Lambert-Hudnut division to sell Richard Hudnut hair care products, Lambert products and Prophylactic Brush Co. products. The new discount structure offered by the division on Hudnut Hair Care preparations is on orders for shelf carton

quantities, 37% profit; on \$24 order, assorted, at list, 38.7% profit; and on \$48 orders, assorted, at list, 40.3% profit.

The Hudnut Sales Co. will continue to market the Richard Hudnut general line of fragrance items and certain hair specialties; the DuBarry Beauty preparations; the Sportsman line of grooming essentials and Parfumes Ciro.

### Companies Join to Produce Polyethylene

Koppers Co., Pittsburgh, Pa., and Brea Chemicals, Inc., Brea, Calif., a subsidiary of Union Oil Co. of California, have announced a joint venture to construct and operate a Ziegler-type polyethylene plant on the West Coast. Proposed plans call for facilities to produce 50,000,000 pounds of polyethylene annually. Anticipated completion is sometime in 1957.

### Dr. Emil G. Klarmann New CSMA President

Dr. Emil G. Klarmann, vice president of Lehn & Fink Products Corp., has been elected president



Dr. Emil G. Klarmann

of the Chemical Specialties Manufacturers Assn. He succeeded Melvin Fuld, president of Fuld Brothers, Inc.

Other officers elected by the 42-year-old trade group are: Harry E. Peterson, of Peterson Filling & Packaging Corp., first vice president; James E. Ferris, Niagara Alkali Co., second vice president; P. C. Reilly, Reilly Tar & Chemical Corp., treasurer; and H. W. Hamilton, secretary.

Named to three-year terms on the association's board of governors were Melvin Fuld, the group's retiring president; Frederick G. Lodes, Precision Valve Corp.; and Ira P. MacNair, MacNair-Dorland Co.

### New Officers for the Year 1956 Have Been Installed by Chicago Chapter of SCC



Left to right: Dr. Kenneth L. Russell, Mrs. Muriel Zeitlin, Peter Parker, Dr. Sylvia Kramer, Gustav Carsch

New officers for the year 1956 have been installed by the Chicago chapter of the Society of Cosmetic Chemists. Dr. Kenneth L. Russell, director of research, Colgate-Palmolive Co., and president of the national society, presided.

The new officers are: chairman, Dr. Sylvia Kramer, Marcelle Cosmetics, Inc.; chairman-elect, Gustav Carsch, The Toni Co.; secretary, Mrs. Muriel Zeitlin, Gene Rose Co.; and treasurer, Peter Parker, Kolar Laboratories.

Paul E. Roehrich and his staff are hard at work on a whole new galaxy of smart RICHFORD Spillproofs and Touch-n-Flo dispensers.

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#### New York Chapter of S.C.C. Seeking More Women Members



Officers of New York Chapter of S. C. C. Left to right: Beverly V. Meigs, secretary; Warren B. Dennis, Jr., chairman elect; William Lambert, chairman; and Theodore Ostrowski, treasurer.

At the meeting of the officers and committee chairmen of the New York Chapter of the Society of Cosmetic Chemists it was announced by Stephen Capkovitz that an effort is being made to interest more qualified women chemists in membership.

The meeting was attended by officers and committee chairmen. The committee chairmen are: Program, Harry Isacoff; By-laws, Dr. Paul G. I. Lauffer; Membership, Stephen G. Capkovitz; Publicity, Vincent DeFeo; Hospitality, Hazel Bishop; House, Irving A. Schlak-

man; Education, Dr. Martin Katz; Interprofessional Relations, Mrs. Maria Wiener; Entertainment, Irving Colbert. Michael A. Stanton, first chairman of the Chapter, was present and contributed much towards helping the new officers and chairmen familiarize themselves with the work of their particular committees and also gave the benefit of his experience to help the new officers carry on the work of the Chapter in the same efficient manner that marked his administration. The organization looks forward to another outstanding year.

#### Kayser Co. Occupies New Quarters

The Kayser Co. of Syracuse, N. Y., a wholesale and retail beauty supply business operated by G. A. Kayser and his sons, has moved to new quarters. The firm now occupies the building across the street from its former location at 146 James St.

#### Visit to Perfume House Described in New Yorker

A recent issue of the New Yorker magazine carried an article by Donald William Dresden which described his tour through the factory of Roure-Bertrand Fils et Justin Dupont, essential oils manufacturing concern in Grasse, France. The story gives an excellent description of manufacturing processes, with entertaining comments on the history of the industry and characterizations of company personnel.

#### Fair Trade Case Up for Review

A fair trade case brought by the Department of Justice against the firm of McKesson & Robbins is to be reviewed by the Supreme Court of the United States. The point in question is whether a wholesaler can avail himself of the Fair Trade Law to protect his prices on sales to other wholesalers and in competition with wholesalers.

#### Electronics in Business Is Theme of Exhibit

The American Management Assn. will conduct its second annual electronics conference and exhibit in New York City February 27-29. Financial, office and other executives interested in business applications of electronic equipment are expected to attend the meeting, which is sponsored by the national management educational association.

#### George Lueders & Co. Not for Sale

F. J. Lueders, president of George Lueders & Co., has recently issued a statement that the persistent rumor to the effect that the company is for sale is not true. Mr. Lueders emphasizes that business continues to be good, and thanks the friends and customers of the firm for their loyal support.



Artist Michael Lemmermeyer, president of Aromatic Products, Inc., stands before an exhibition of his paintings shown at the Convention of the Chemical Specialties Manufacturers Assn. at the Hotel Roosevelt in New York. Pictured here are (left to right) Mr. Lemmermeyer; Mr. H. W. Hamilton, secretary of C.S.M.A.; and Dr. E. G. Klarmann, president of C.S.M.A.

### Soap and Glycerine Producers Will Meet This Month

The annual meeting of the Assn. of American Soap & Glycerine Producers, Inc., scheduled for January 25-27 at the Waldorf-Astoria hotel in New York City, will feature the impact of automation, the continuation of high level economy and research into buying trends for soap and detergents as discussion highlights.

On January 26 the luncheon speaker will be Eric Johnston, president of the Motion Picture Assn. of America. His topic is "Who's Sabotaging Our Economy?"

The future of atomic energy as a peacetime force will be described by Dr. Lauchlin Currie, vice president of the Union Carbide Nuclear Co., at noon January 26. The morning session will bring the president's annual review of the year, presented by E. W. Wilson, vice president of Armour & Co. The state of the nation's economy will be outlined by Dexter Keezer, economist. S. G. Barton, president of Market Research Corp. of America, will describe retail marketing trends of soaps and detergents.

Prof. Ernest H. Schell of Massachusetts Institute of Technology will discuss the impact of automation on plant processing operations on the morning of January 27. Automation as applied to office and marketing procedures will be covered by Dr. C. R. DeCarlo, director of Applied Science, International Business Machines Corp.

Topics of concern to producers of industrial soaps and fatty acids will be discussed on January 25 when the luncheon speaker will be Edgar L. Burtis of the Food & Agricultural Organization of the United Nations. He will talk on world trends in production and use of fats and oils. The effects of textile and rubber developments on fatty acids will be discussed by Emery I. Valko, vice president of Onyx Oil & Chemical Co., and Donald Druessedow, development supervisor, of B. F. Goodrich Chemical Corp. Group meetings on industrial soap products for skin cleaning, building maintenance, dishwashing and other specific uses will also be held.

The convention will also include a meeting on January 26 of the Glycerine Division, at which Oscar P. Muller of National Lead Co., will talk on "New Developments in Alkyd Resins." Max Wolf of the Quartermaster Food & Con-

tainer Institute will discuss "New Developments in Acetylated Glycerides;" and Leo Pasternak will cover "Foreign Trade and Trends in Glycerine."

The convention, which is celebrating the association's 30th year, is being featured as the Diamond Anniversary meeting.

### DCAT Announces Cosmetics Committee Appointments

The DCAT section of the New York Board of Trade has announced the 1955-56 members of the Cosmetics, Toiletries & Essential Oils committee, as follows: Robert Horsey, Givaudan-Delawanna, Inc., division chairman; G. S. Furman, George Uhe Co., Inc.; and George A. Kaempkes, Pacquin, Inc.

### Peggy Sage, Inc. to Distribute Own Products

Miss Peggy Sage, president of Peggy Sage, Inc., announces that the company will assume the distribution of her manicure preparations and lipsticks. Previously the products had been distributed by Mary Chess, Inc. under the name of Peggy Sage Sales Corp.

### New Aerosol Packaging Firm in Illinois

The newly organized Peterson Filling and Packaging Co. of Danville, Ill., is now in production. The firm is doing contract and custom filling and packaging of all types of containers with specialization in aerosols. Harry E. Peterson, president, was formerly head of Continental Filling Corp.

### Penn-Texas Corp. Purchases Colt's Manufacturing Co.

As a result of the purchase of the business and assets of Colt's Manufacturing Co., of Hartford, Conn., the Penn-Texas Corp. now possesses Colt's as a wholly-owned subsidiary. The two will operate as separate organizations.

### General Management Conference To be Held in San Francisco

The American Management Assn. announces that a General Management conference will be held in San Francisco, Calif., January 24-27.

### Board of Directors of Van-Ameringen-Haebler Announces Changes in Corporate Officers



Arnold L. van Ameringen

The board of directors of van Ameringen-Haebler, Inc., has announced that Arnold L. van Ameringen, formerly president, now occupies the newly created post of chairman of the board, and that Charles P. Walker, Jr., is president and chief executive officer of the company.

Mr. Walker became an officer and director of van Ameringen-Haebler, Inc. in February 1953, and has been serving as executive



Charles P. Walker, Jr.

vice president. He had previously been general sales manager and a member of the board of directors of Chas. Pfizer & Co., Inc.

Mr. van Ameringen will continue to devote his full time to the interests of the company, which was founded in 1909 and is a supplier of raw materials to the perfume, cosmetic, food and soap industries. It operates two chemical plants in New Jersey and a subsidiary factory in Paris, France.



## California Cosmetic Assn. Installs Officers for the Year 1956



Seated, left to right: Lyle Christy, Harry F. Taylor, A. C. Schaefer. Standing, left to right: Gene Salee, D. G. Edmonston.

California Cosmetic Assn. installed its officers for 1956 during the organization's annual banquet which took place recently in Beverly Hills.

Before an assemblage of more than 200 members and guests, Arnold L. Lewis, Installing Officer, presented the president's gavel to Harry F. Taylor, founder and head of Studio-Girl-Hollywood, Inc. Inducted with him were First Vice President Lyle Christy, Luziers,

Inc.; Second Vice President A. C. Schaefer, Glenway Co.; Secretary Gene Salee, Gene Salee, Inc.; and Treasurer Don G. Edmonston, Colonial Dames, Inc.

Members elected to serve on the Board of Directors include Davis Factor, Dr. Paul Jewel, M. Herbold, E. M. Stolaroff, A. J. Coghlan, John Danley, Arnold L. Lewis, A. F. Commagere, Thomas Sheffield and James Turner. Marie V. Carroll was reappointed Executive Secretary.

## Ogilvie Sisters Appoints Mid-West Representative

Ogilvie Sisters has announced that Joseph R. Handman and Associates of R. R. 3, Box 108, Cedar Lake, Ind., now represent the company in the states of Indiana, Illinois, Michigan and East Wisconsin.

## Chicago SCC Hears Talk on Aerosols

Eugene Rose, president of Gene Rose Co., Inc., spoke to the Chicago Chapter of the Society of Cosmetic Chemists at its first meeting of the year on January 10. His talk, "Aerosols Are Here to Stay," was illustrated with films.

Mr. Rose, one of the founders of the Chicago Chapter of the society, has spent 15 years in cosmetic research, specializing in the fields of anti-perspirants, deodorants, face creams and shampoos.

## New York Board of Trade Announces Directors

Announcement of the directors of the New York Board of Trade was made by the president of the Board, Bernard P. Day, at the annual meeting of the organization in December.

They are: Robert W. Dowling, president, City Investing Company; Myron Walker, president, Walker Laboratories Inc.; L. D. Barney, president, Hoffman La Roche Inc.; George T. Hammond, executive vice president, Carl Byoir & Associates, Inc.; W. E. Ehrmanntraut, vice president, American Surety Co.; Robert V. Cronan, vice president, Charles F. Noyes Co.; and Sydney N. Stokes, assistant to president, van Ameringen-Haebler Inc.

## Fritzsche Brothers Moves Boston Office

Fritzsche Brothers, Inc., announces that its Boston office has been moved from the Statler Building to 661 Washington St., Norwood, Mass. The new telephone number is NORwood 7-3303.

## Cosmetic Tax Collections Show Sizeable Increase

Cosmetic tax collections for the quarter ending September 30, 1955 were \$18,490,000, as compared with \$16,225,000 for the same period of 1954.



Edmund D. Bennett, president of Fluid Chemical Co. of Newark, N. J. and Dr. Hamilton, president of Chemical Specialties Manufacturers Assn., welcome Sharon Kay Ritchie, Miss America of 1956, to the association's convention at the Hotel Roosevelt in New York City on December 6.

## CITRUS OILS

Oil of Bitter Orange N. F.  
Worlds Largest Producer

OIL OF LIMES

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OIL OF TANGERINE

OIL OF LEMON CAL.

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## which jar-disc IS BEST FOR YOUR PRODUCT?



jar-disc PROTECTS the surface and appearance of your product — keeps the closure dry and clean.

jar-disc gives your product a PRESTIGE look, is oyster white, opaque, matte finish with sturdy .005 "body". The message on a printed jar-disc frequently eliminates a label.

jar-disc costs surprisingly little. Write for samples and quotations on your letterhead. Indicate sizes and quantities. If possible mail sample jar for exact fit.

- A. FLAT STYLE for every jar size. Most sizes in stock.
- B. PRINTED FLAT STYLE. Saves a direction label while it protects and beautifies.
- C. FORMED STYLE. Shaped with a ridge to fit jar opening exactly.
- D. HOT STAMPED. Either plain or formed, may be stamped with your logo in gold or color.
- E. EMBOSSED. Either style may be embossed or debossed with your logotype.

\*NOTE: Some sizes also available in molded polyethelene.

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PACKAGING ENGINEERS

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It contains formulas for almost everything imaginable; new ways of doing things; technical process; so-called trade secrets. It has helped thousands make more from their present businesses and professions. A single formula may be worth 100 times the price of the book.

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- Aromatic Chemicals
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& COMPANY, INC.

7 WILLIAM ST., BELLEVILLE 9, NEW JERSEY

#### Six New Members Join Givaudan-Delawanna's Quarter Century Club



From left to right, Dr. Max Luthy, vice president of production and research of Givaudan-Delawanna, Inc.; Joseph Balsam; Miss Louise Lehman; Edwin P. Nicholson; William Wisse; Miss Ellen Stapleton; E. R. Durrer, president; and R. E. Horsey, vice president in charge of sales.

The annual Christmas party of Givaudan-Delawanna, Inc. was held at the Swiss Chalet, Rochelle Park, N. J., on December 17, 1955, at which time six employees were presented with gold Swiss watches to celebrate their twenty-fifth

anniversary with the company. The six new twenty-five year veterans brought the number to 63.

E. R. Durrer, president and R. E. Horsey, vice president in charge of sales, addressed approximately 400 of the firm's employees.

#### Dow Corning Corp. Receives Award for Silicones

Dow-Corning Corp. of Midland, Mich., has received the 1955 Award for Chemical Engineering Achievement from the Manufacturing Chemists Assn. The company was honored for its pioneering work in the field of silicones.

#### New Officers for Carr-Lowrey Glass Co.

The Carr-Lowrey Glass Co., and its subsidiary, Swindell Brothers, Inc., both of Baltimore, Md., have elected new officers, the parent organization, the Anchor Hocking Glass Corp., announces.

John H. Funkey is now president of Carr-Lowrey Glass Co., and also president and a director of Swindell Brothers, Inc.

C. R. Hilgenberg was elected treasurer of Carr-Lowrey, and continues to hold the offices of vice president and secretary.

J. J. Jeffries, vice president and secretary of Swindell Brothers, Inc., assumes the position of assistant treasurer also.

W. J. Burt, assistant secretary

of Carr-Lowrey Glass Co., was also elected assistant treasurer.

Cyrus L. Fulton, vice president in charge of finance for Anchor Hocking Glass Corp., and an Anchor Hocking director, was named a director of Carr-Lowrey and a director of Swindell Brothers.

#### Florasynth Holds Meeting Of Executives and Sales Staff

Executives of the Florasynth Co., William Lakritz, president; Joseph H. Fein, treasurer; Jack Friedman, vice president; and David Lakritz, vice president and chief chemist, were hosts to the sales staff covering eastern territories at a year-end meeting.

There was a full program of discussions covering production and sales levels, accomplishments and objectives. David Lakritz elaborated upon new materials and applications for the future and each of the executives reviewed coverage and service to industry. Mr. Friedman gave the group an insight of the many developments in the mid-western and western divisions of the company.

#### Firm to Manufacture Aerosol Propellant Material

Pennsylvania Salt Manufacturing Co., Philadelphia, Pa., has announced that it will enter the aerosol propellant and refrigerant fields late in 1956 with the introduction of a complete family of chlorofluorohydrocarbons, the Isotron line.

A multi-million dollar plant to produce the line is already under construction at Calvert City, Ky. The company owns extensive fluor spar mines in the area, and several other plants are nearby to help supply necessary raw materials.

#### Amendment to Imported Perfumes Customs Regulation

Part 8 of the Customs Regulations, relevant to the import of perfume containing alcohol, has been amended. The point in question pertains to section 321 of the Tariff Act of 1930, which deals with the exemption of articles from duty if the total amount of duty does not warrant the expense of collection.

The amendment of the Customs Regulations says that no alcoholic beverage, perfume containing alcohol or tobacco product shall be exempt from duty under this section if the value exceeds \$1.



Billionth collapsible metal tube made in one year in U. S. A. is plucked from production line by Cathy Hild, dressed in gown of the 1840's when the metal tube was invented. This year marks first time in 114-year-old history of the industry that the billion-tube mark was reached. Standing by to receive "milestone" tube is Lester B. Platt, executive secretary of the Collapsible Tube Manufacturers Council.

### Warner-Lambert Affiliate Opens New Plant in Havana

Ceremonies in Havana, Cuba in December marked the opening of a new \$250,000 plant by Warner-Lambert, S.A., Cuban affiliate of the Warner-Lambert Pharmaceutical Co. Company executives, including Elmer H. Bobst, chairman of the board of Warner-Lambert, and Alfred E. Driscoll, president, participated.



A little late for Christmas, but a cosmetic display which should not be overlooked is this festive holiday design in white and gold from the Scovill Manufacturing Company.

### Tooth Brushing More Costly in Fair Trade States

Ward S. Bowman, Jr., associate professor in the University of Chicago law school, has published an article which reveals that toothpaste prices are higher in fair trade states. Mr. Bowman made this statement in a story, based on data from the Market Research Corp. of America, which was published in the university's *Law Review*. His conclusions were based on an

analysis of toothpaste prices in both fair trade and non-fair trade states from January 1951 through January 1953.

The study revealed that on the largest size toothpaste tube, prices averaged 4.2% higher in fair trade states than in non-fair trade states, and that the next smaller size was 4.3% higher. But it was also revealed that established minimum prices were widely disregarded in both fair trade and non-fair trade states, and that toothpaste prices tend to be higher in small towns and rural areas than in cities in both type states.

### Dodge & Olcott, Inc. Move Chicago Office

Dodge & Olcott, Inc., announce the removal of its Chicago sales office under the direction of Kenneth Hartley to 5537 North Clark St., Chicago 40, Ill. The telephone number is Longbeach 1-8996.

### Convention Delegate's Expenditures to be Studied

The International Assn. of Convention Bureaus has revealed that it will make a survey of convention delegate expenditures in 1956. The last such survey made in 1948 revealed that the average stay per delegate for 423 conventions was 3.9 days, with an average expenditure per day of \$24 and per convention of \$93.69.

Total expenditures and length of stay were found to run considerably higher for national and international conventions than for state and regional conventions—4.41 days and \$107.53 as against 2.86 days and \$65.13.

### Raymond Spector Receives Quaker Award



From left to right: Raymond Spector; William H. Sylk, club president; and Harry S. Sylk.

The first Quaker Award of the Golden Slipper Square Club was presented to Raymond Spector, president of the New York advertising agency bearing his name and head of Hazel Bishop, Inc. The honor, designated for a Philadelphian who has brought credit to the community through his accomplishments in his own particular field of endeavor, was accorded Mr. Spector at the November meeting of the club, which is one of the foremost fraternal and philanthropic organizations in the country with a membership of over 1500 business and industrial leaders in the community.

Presentation was made by Harry S. Sylk, past president. William H. Sylk is president of the club.



Groups of those attending the Tenth Anniversary Society of Cosmetic Chemists' dinner honoring Dr. Ernest Guenther, Eighth Medalist, and twelve charter members. Left photo, directly in front: Mrs. E. H. Hamann, K. W. Tracy, Mrs. Tracy, Dr. E. H. Hamann, Mrs. Ann Hencken, Fred W. Leonhardt, Jr., Mrs. E. P. Millard, E. P. Millard, Mrs. F. J. Stebbins, and Frank Stebbins. Right photo, left to right: Robert Krone, Ernest Durrer, Mrs. Ann Hencken, Dr. Pierre Bouillette, Dr. Ernest Guenther, Savory F. Coneybear, Mrs. John H. Montgomery, and John H. Montgomery, president of Fritzsche Brothers, Inc.





Luis de Hoyos, left, vice president of Synfleur Scientific Laboratories, is congratulated by Jack Ardis, award chairman, on the trophy awarded him for winning the 1955 angling championship of the Miami Beach Rod and Reel Club, a world famous organization for anglers.

#### **New Odor Product Sharpens Pig's Appetite**

Dodge & Oclott have introduced a new idea in animal feeds. Odorama, Aroma Feed Enhancer, is said to be an odor product which, when used in mash or pellet form, is effective for weaning the piglet and for continued maximum feed utilization by the hog throughout the entire feeding period. It is also available in specific forms for cattle and poultry feeds.

#### **Consumer Products Show Aimed at Negro Market**

Continental Expositions has announced that the first consumer

products show aimed specifically at the 16 billion dollar Negro consumer market will be held in New York City on March 25-April 1. Called Exposition of Progress, it is conceived as a horizontal type show which will exhibit all types of consumer products with at least 300 manufacturers represented.

#### **Risdon Manufacturing Co. Gives Exclusive License**

The Risdon Manufacturing Co. has announced that an exclusive license has been granted Glenham Products, Ltd., London, for the manufacture and sale of Risdon aerosol dispensing valves in England. Glenham Products is one of the Hammerson Group

#### **Seeley & Co.**

##### **Builds New Factory**

Construction of a new factory, laboratory and office building is in progress in Toronto by Seeley & Co., (Canada) Ltd. Work on the new building is expected to be completed in February. It marks the first move by the essential oil house in 15 years and will shift the company's operations from downtown Toronto to North York.

The new building will include modern laboratory facilities for developing flavor concentrates for the food industry and perfume bases for cosmetic manufacturers and for general industry. It will also provide expanded office and storage space replacing present warehouse facilities.

#### **Fritzsche Brothers Holds Annual Sales Meeting**

The week-long sales conference of executives, department heads and sales representatives of Fritzsche Brothers, Inc., New York chemical firm, was held in December. John H. Montgomery, president, opened the meeting, and introduced Frederick H. Leonhardt, chairman of the board, who gave the welcoming address. The program consisted of daily conferences and panel discussions on sales, flavors, and perfumes and industrial odorants.

Mr. Montgomery officially announced the appointment of R. W. Montgomery as sales manager, Robert Krone as manager of the flavor division, W. R. Godfrey as manager of the perfume division, and E. A. Lawson as manager of the industrial odorant division.

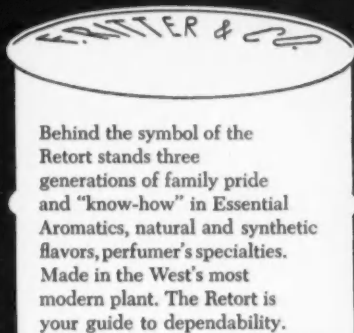


The Fritzsche Brothers, Inc. annual cocktail party, buffet supper and dance at the Sherry Netherlands Hotel in New York City climaxed a week-long series of sales conferences for nearly 150 visiting sales representatives, executives, department heads, and their wives.



look for the symbol of the **RETORT**

**YOUR GUARANTEE  
OF MATCHLESS QUALITY,  
PURITY, UNIFORMITY**



Behind the symbol of the Retort stands three generations of family pride and "know-how" in Essential Aromatics, natural and synthetic flavors, perfumer's specialties. Made in the West's most modern plant. The Retort is your guide to dependability.

**F. Ritter & Co.**  
Los Angeles 39, California  
Branch Offices in Principal Cities



*Secret Number 8*

**did you know?**

... that the thermally-reversible gelling characteristic of SeaKem "Colloids Out of the Sea"\* can contribute important improvements to such products as calomine lotion? The addition of very low concentrations of the proper SeaKem extractive, then continuing agitation during cooling, results in an interrupted gel structure that stabilizes such suspensions extremely effectively.



\* SeaKem is the registered trademark for the standardized hydrocolloids obtained from Irish Moss by the Seaplant Chemical Corporation. Extracted and refined by rigidly controlled processes which insure dependable uniformity and purity, SeaKem Colloids are contributing importantly to a variety of drug, cosmetic and pharmaceutical products. In addition to their unique effectiveness in a wide range of stabilizing functions, SeaKem Irish Moss extractives possess interesting emollient and demulcent properties.

Write today for more information.

**Seaplant** CHEMICAL CORPORATION

63 David Street, New Bedford, Mass.

& Aromatics

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CHEMICALS

PRODUCTS  
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SPECIFICALLY FOR APPLICATION

IN COSMETIC FORMULATIONS

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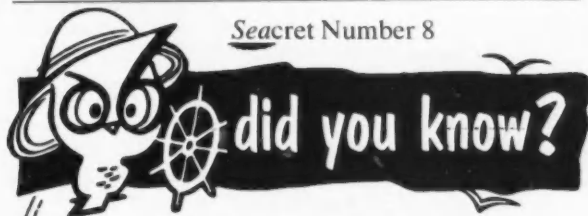


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SPECIFICALLY FOR APPLICATION  
IN COSMETIC FORMULATIONS**

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CHEMICALS PRODUCTS  
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LODI, NEW JERSEY



### Cosmetic Career Women Give Christmas Gifts to Conn. Flood Area



Seen seated on the dais, left to right, are: Miss Rita Caron; Miss Kay Colton, who introduced the guest speaker; Miss Mala Rubinstein, the guest speaker; and Miss Amy Blaisdell.

Members and guests of the Cosmetic Career Women meeting at the Waldorf-Astoria hotel in New York City brought Christmas gifts for children in the Connecticut flood area, location of many suppliers to the cosmetic industry. The presents were transported to South Norwalk, Conn. by Charles of the Ritz, Inc. and distributed by the Salvation Army and the Day

Nursery of South Norwalk.

Miss Mala Rubinstein of Helena Rubinstein, Inc. was guest speaker. She discussed women's role in the cosmetic industry, taking note of selling, advertising, editorial and art work, and scientific research.

Guest speaker for the luncheon on February 7 will be Dr. Leona Baumgartner, health commissioner for New York City.

### New Perfume For Lux Soap

Lux soap, product of Lever Brothers Co., has been given a new perfume. Recently repackaged in a gold foil cover, the soap is now scented with the odor developed at the company's research center in Edgewater, N. J. The scent, which is composed of 37 different materials, is said to have no dominant personality, but that individuals tend to pick out particular fragrances.

### Union Carbide Announces Division for Silicones

Silicones Division, Union Carbide and Carbon Corp., has been formed to take over the responsibility for the development, manufacture, and sale of silicone products, announces Morse G. Dial, Union Carbide's president. Mr. Dial stated that the formation of the new division reflects the expansion of the corporation's activities and its interest in the fast-growing field of silicones.

### Rayette, Inc. Salutes Professional Hairdressers

Rayette, Inc., will salute professional hairdressers with a full-page,

natural-color ad in *Life* magazine on February 13. A special tribute in honor of National Beauty Salon Week, the advertisement will be seen by some 25 million *Life* readers, according to Gerald K. Peterson, Rayette advertising manager.

### Dehydag Reinstates Texapon Trademark

Dehydag, Deutsche Hydrierwerke GMBH, announces that the company will again use the trademark Texapon to designate its fatty alcohol sulphates in liquid, powder and paste forms. During the last two years the products have been called Dehydag sulphates.

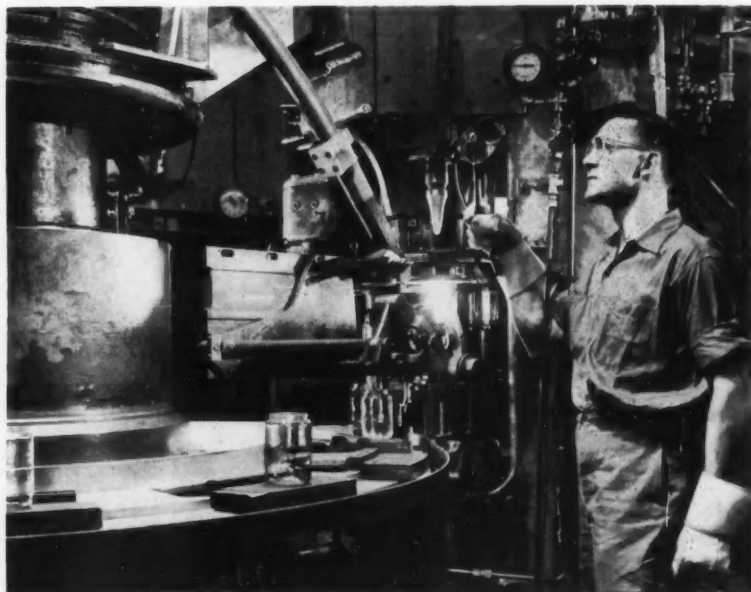
### Hazel-Atlas Forms Beverage Container Sales Department

The Hazel-Atlas Glass Co. announces the formation of a Beverage Container Sales department at its general office in Wheeling, W. Va. H. Carman Crago, who has long been associated with the company's sales activity, will manage the department.

### Aromatic Products, Inc. Completes 20th Year

Aromatic Products, Inc., a company devoted exclusively to the creation of perfume odors, has completed its twentieth year of existence. Founded in 1935, the firm has gained a widespread reputation in the industry.

Michael Lemmermeyer is president of the company.



The Owen-Illinois Glass Co. has revealed a new manufacturing process which it claims produces glass containers that are both stronger and 20 per cent lighter than the conventional glass jar. This has been achieved on the experimental machine seen above. The commercial model, which is now under construction, is expected to about double present glass container production rates. Research on the process was started about twelve years ago.

### Tobin Heckkoff Is Chairman of Lighthouse Cosmetics Committee

Tobin Heckkoff, cosmetics buyer for the United Cigar-Whelan chain, has been named chairman of the cosmetics committee of The Lighthouse of the New York Assn. for the Blind. He will organize members of the cosmetics trade to participate in the campaign to raise funds for The Lighthouse to further its work among blind people in the Greater New York area and for research in the prevention

and cure of blindness on a national basis.

### Mexican Perfumists Propose Legislation

The Asociacion Nacional de la Industria de Perfumeria, A. C., of Mexico reports that it has delivered to the General Health Dept. of the national government a project of Regulation for Toilette and Beauty preparations. The proposed legislation would serve to aid the cosmetic industry of the country.

### Tips on Beauty Given In Magazine Article

The January issue of Ladies Home Journal carries an article by Dawn Crowell Norman, Beauty Editor, which gives hints on cosmetics, hair, and costume. The article is effectively illustrated with before and after photos.

### Alfred E. Driscoll Is Chairman in Hospital Appeal

Alfred E. Driscoll, president of Warner-Lambert Pharmaceutical Co., Inc., has been named chairman of the chemical and drugs division of the United Hospital Fund's 76th annual fund raising appeal.

### Obituary

#### Duncan W. Taylor

Duncan W. Taylor, retired general manager of Colgate-Palmolive Company, Jersey City, N. J., died December 18 in Plainfield, N. J. He was eighty-six years old.

Mr. Taylor spent his entire business career with Colgate. He retired in 1927.



Shulton, Inc. recently sponsored a tour of its Clifton, N. J. plant for 150 wives of members attending the 57th annual convention of the National Assn. of Retail Druggists. The group was addressed at luncheon by Richard Day, director of industrial relations for Shulton. Each guest was presented with a gift from the company's new toiletry line, "Escapade."

## are you searching for a scent?



We at Perry Bros. have solved scores of perfume puzzles and we'll be glad to help you with yours.

Let the creative talent and experience of Perry Bros.' master perfume chemists design the fragrance that is correct technically and aesthetically to make your soap, aerosol, hair and toilet preparation a sales success.

**PERRY BROS.**  
are happy to congratulate "American Perfumer and AROMATICS" on the excellence and beauty of its new format.





## PERRY BROS., inc.

manufacturers of  
PERFUME BASES  
ESSENTIAL OILS  
AROMATIC PRODUCTS  
FLAVOR BASES

**61-12 Thirty Second Ave.  
Woodside 77, L.I., N.Y.  
RAvenswood 1-3636**

**Sales Representatives:**  
Chicago St. Louis Los Angeles Brookfield, Conn. Montreal



Here is a portrait of a gentleman who has just carried out his New Year's Resolution!

He resolved to try to get more information on how to improve his products and increase his sales during the coming year. (He's a man who is interested in doing a better job!)

Our friend has every right to be pleased, because he's just carried out his resolution by subscribing to the new **AMERICAN PERFUMER & Aromatics!** And "American Perfumer" is the only publication that will provide him with the successful, business-building ideas he needs to keep up with the pace-setters in this industry.

Perhaps this would be a good time for you to order your subscription.

#### SUBSCRIPTION ORDER FORM

American Perfumer & Aromatics  
48 West 38th Street  
New York 18, N.Y., U.S.A.

Please enter my subscription to the new **AMERICAN PERFUMER & Aromatics**, for one year at \$4.00.

(Please Note: This rate effective in USA and Canada only. To cover added postage costs, subscription rates in other countries is \$10.00 per year.)

Name

Company

Address

City

Zone  State

- ☐ Payment Enclosed  
☐ Bill Me Later

## SPOTLIGHT

News...

**Imported mellowed rum** is the dominating ingredient in a mouth wash **Encore** offered by the James Ormont Co. The rum it is stated doesn't have the bite of alcohol and in addition has a flavor that is highly popular. . . . **Cosmetic Career Women** will meet February 7 to hear a talk by New York Health Commissioner Dr. Leona Baumgartner. . . . **Foragers of America**, the oldest association in the industry, held their annual banquet January 13. . . . **Mother's Day**, inaugurated by Congress in 1914, and second only to Christmas as a merchandising opportunity, will be observed May 13. . . . **Gasoline stations** may sell beauty aids to motorists through vending machines or mobile racks if the investigation by General Stores Corp. warrants tapping this vast outlet of over 500,000 gasoline stations in the United States. Mobile toiletry rack units would be rolled to an automobile while it is being serviced so that beauty aids could be selected without leaving the car. One large oil company is reported to be interested in the project. . . . **Sales of Revlon cosmetics** in 1954 were \$33,723,000. In the first eight months of 1955 sales were \$26,415,938 wholesale. . . . **Nineteen million girls** between the ages of 3 and 15 years constitute the kiddie cosmetic market. Their needs were first recognized by the late Helene Pessl. Now Little Lady cosmetics are produced in a \$300,000 plant in New Rochelle, N. Y. . . . **Royalties** of \$50,000 annually from Procter & Gamble's Crest tooth paste containing stannous fluoride are anticipated by Indiana University Foundation. . . . **The world's most expensive make-up**, Countess Isserlyn, which retails at \$20 per ounce, is being promoted by Anatole Robbins. . . . **A snuff gift set** containing cologne, after shave lotion and talcum was offered by Schiaparelli for the Christmas trade. . . . **A spray hair fixative**, the first to be packaged in a glass bottle, has been launched by Lenthieric to retail for \$1.50. . . . **First American Trade Fair** will be held in the New York Coliseum April 14-27, 1957. . . . **Joe Louis**, ex-heavyweight boxing champion,

is reported to be interested in a cologne to be offered by an associate to be named "My Man Joe." Mr. Louis recently married a beauty shop operator. . . . **Silicones** are appearing in cosmetics. Roger & Gallet's new Lip Aid contains them as does also Lotion Superbe for hands and body offered by DuBarry. . . . **Bymart-Tintair's** board chairman Martin Straus II is head of Marlow Chemical Co., makers of a push button home fire extinguisher. . . . **Questionnaires** on their fair trade experience are being sent to retailers and wholesalers by the Small Business subcommittee of the U. S. Senate to find out how they think fair trade enforcement can be improved. . . . **A nail polish brush** which resembles a fountain pen and feeds the polish from a cartridge in the holder into a small nylon brush when the user tips the dispenser downward has been introduced by Fabron. When upright the brush retracts into the aluminum barrel. . . . **A new type ointment base** utilizing a form of versatile plastic polyethylene has been developed by E. R. Squibb & Sons. . . . **Mme. Chanel**, of perfume fame, has sold her life story to a Hollywood movie producer. . . . **Jack Mohr**, general manager of Lenthieric was one of the winners in Red Book's cheese recipe contest. . . . **Stork Club** proprietor Sherman Billingsley has launched a new perfume called Cub. . . . **Professional beauty salon services** will be promoted by saturating patrons and consumers with publicity in the period leading up to and during National Beauty Salon Week February 12-16. The National Hairdressers & Cosmetologists Assn. has allocated about \$40,000 for the public relations program. . . . **The Drug, Cosmetic & Chemical Credit Men's Assn.** is taking into consideration a proposed merger with the National Chemical Credit Assn. An open vote from the floor by members of the former indicated unanimous approval of the merger, provided an acceptable constitution is drafted. . . . **The 1956 annual convention** of the National Beauty and Barber Manufacturers' Assn. is set for August 18 in Chicago.



## PERSONALITIES

**Robert G. Urban** has been appointed executive vice-president of the Lambert-Hudnut division of the Warner-Lambert Pharmaceutical Co. In his new post he will



**Robert G. Urban**

have overall executive responsibility for the marketing activities of the division, including sales,

advertising, merchandising and product development, and sales planning and budgetary control. In the future all the research, manufacturing, marketing and financial functions of Warner-Lambert's toiletry and cosmetic businesses are to be under the Lambert Hudnut division.

**H. Emerson Benge** has been named sales representative by Shulton, Inc. for the firm's lines of Old Spice for Men shaving and grooming products and women's toiletries.

**Seymour Murray Kent** has been appointed package designer for Tussy Cosmetics. For the past five years Mr. Kent has been associate art director for Helena Rubinstein, Inc. and Gourielli, Inc., responsible for point of sale dis-

plays and all product design. Prior to that, he covered Fashion Collection for D. Waddington, Co., European representatives for Amos



**Seymour Murray Kent**

Parrish. Mr. Kent was graduated from Pratt Institute, where he majored in advertising design.

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**Pete Niles**, Chicago manager of Fritzsche Brothers, Inc., became the fiftieth active member of the firm's Quarter of a Century club in December.

**Paul D. Blackman** is the new general sales manager of General Beauty Products, Inc., which comprises Lucien Lelong Perfumes, Marie Earle Cosmetics, and Lilly Dache Hair Cosmetiques. He was formerly sales manager of Helene Pessl, Inc.

**Fritz Degener**, general sales manager of Heyden Chemical



Fritz Degener

Corp., who has completed 25 years service with the company, was guest of honor at a luncheon given in November at the Union League Club in New York City by Heyden executives. He was presented with a gold watch and diamond service pin by John P. Remensnyder, chairman of the board. Mr. Degener has been general sales manager of Heyden since 1953. He is a past president of the Chicago Perfumery, Soap and Extract Assn. and a member of the Chicago Drug and Chemical Assn., and other chemical organizations.

**J. E. Meihuizen**, managing director of Polak's Frutal Works NV., Amersfoort, Holland, arrived in early December by air in the United States for conferences at the head offices in Middletown, N. Y. Mr. Meihuizen is not a newcomer to these shores, having been here on several occasions. He left again for Holland by plane on December 18.

**Dr. Henri F. Logcher**, formerly export manager for Magnus, Mabée & Reynard Inc., New York essential oil house, has been named president of Polarome International Corp. with headquarters in New York City.

**Robert Walker** has been appointed advertising manager of Dorothy Gray, Ltd. He was previously advertising manager in charge of print media for Whitehall Pharmacal Co. and account executive at Erwin Wasey.

**Edwin Parets** has been elected a vice president of Park & Tilford Corp. and will direct advertising, sales promotion and merchandising on Tintex household dyes, and Park & Tilford toiletries.

**Norma Craig** has been appointed publicity director of Tussy Cos-



Norma Craig

metiques. She was associate beauty and grooming editor of Woman's Home Companion before joining Tussy, and has worked in the past as assistant fashion advertising manager for Montgomery Ward; West Coast fashion editor of Parents' magazine; and assistant publicity director of Shulton, Inc. Miss Craig is a member of the Cosmetic Career Women and the Fashion Group of New York.

**Dr. Paul Bedoukian** was recently elected a Fellow of the American Numismatic society. He is a recognized authority on the numismatics of medieval Armenia and is reputed to possess the finest private collection of coins of this period. Dr. Bedoukian has done considerable research in this field with a view to writing a book on the subject.

**Graham Barker** has been appointed industrial products technical representative of Emulsol Chemical Corp., a division of Witco Chemical Co. He has been assigned to the New York-New Jersey area, and will have his headquarters in Newark. Mr. Barker received his B. S. in chemistry from the City College of New York in 1942, and his M. A. in 1954 from Brooklyn College after specialized work in

nitrogenous surface active agents. He is a member of the American Chemical Society and other technical organizations.

**Paul F. Hand** has been named assistant to the president of General Aniline & Film Corp. Mr. Hand was awarded an M.B.A. degree from Harvard's graduate school of business administration in 1938.

**Adolphe E. Barere** and Mrs. Estelle Barere, owner of the Biochim Laboratories, are celebrating



Adolphe E. Barere

their fifteenth wedding anniversary. Mr. Barere has been assistant to the plant manager and to the chief chemist at Helena Rubinstein, Inc., and in 1951 joined Coty, Inc. as head of the Brooklyn Research Laboratories, supervising at the same time the subsidiary plant located on the same premises.

**James K. Lindsay** has been elected treasurer of Heyden Chemical Corp. to take the place of George B. Schwab who is retiring. Bernard Reiter has been chosen assistant treasurer. Mr. Lindsay will continue as secretary of Heyden, an office he has held since 1953.

**Richard Lockman**, who joined the Emil Mogul Co., Inc. earlier this year as vice president in charge of the agency's Drug, Cosmetics & Toiletries division, has become a principal stockholder and been elected a member of the executive management group of the agency.

**Paul Byrne** has been appointed assistant merchandising manager of the Toilet Article Dept. of Colgate-Palmolive Co. Arthur T. Castillo was named assistant new products manager in the same department.

**Fred C. Wilckens**, president and director of Kolmar-Wilckens, Ltd. for the past 10 years, retired from active business on November 30. Mr. Wilckens joined Helfrich Laboratories of New York when that company was organized and in 1936 went to Toronto, Canada to open and manage the Helfrich Canadian plant. In 1940 he started his own company under the name of Wilckens Chemical & Cosmetic Laboratories, Ltd. In 1945 he became associated with Kolmar Laboratories, Inc. of Milwaukee and in 1949 sold the controlling interest of his company to Kolmar at which time the name was changed to Kolmar-Wilckens, Ltd. From 1949 until his retirement Mr. Wilckens held the position of president and director of this company.

**Frederick M. Avery** has been named premium buyer of the Colgate-Palmolive Co. He formerly was associated with Colgate's premium department, which ran the Octagon premium plan, the world's largest cooperative coupon-redeeming program. Recently Colgate and three other firms set

up Premium Associates, Inc., an independent company, to handle the premium plan. Mr. Avery will be in charge of all premium buying for Colgate's soap and toilet articles department, and his headquarters will be at the Colgate home office in Jersey City, N. J.

**Jean R. L. Martin** has resigned his position as director of the General Research Laboratories of Coty Products Corp., New York. Dr. Yolanda Valer, assistant director of the laboratories, resigned at the same time.

**Wiley F. Patton** has been appointed assistant to the director of marketing of the Lenthier Division of Olin Mathieson Chemical Corp. Mr. Patton, a graduate of the Harvard School of Business Administration, has been associated with Hudnut Sales Co. in a sales administration capacity for over 10 years.

**Warren B. Dubin** is now merchandising manager for Pond's cosmetic products, announces Chesebrough-Pond's Inc.

**Dr. Robert S. Aries** has been elected to the New York Academy of Sciences in recognition of his achievements in science. He is president of the chemical consulting organization of R. S. Aries & Associates.

**William T. Tilden III** has been named treasurer of Zonite Products Corp. Prior to his appointment he was treasurer and controller of the Benjamin Foster Co.

**Joseph S. Keating** is now filling the newly-created position of director of sales training and merchandising of Dorothy Gray, Ltd.

**E. R. Durrer**, president of the Givaudan Corp. and its associate companies, Givaudan-Delawanna, Inc., Givaudan Flavors, Inc., and Sindar Corp. has been elected to the board of directors of the French Chamber of Commerce of the United States Inc.

**Betty Metcalf** has opened a boutique for women in the Gourielli Shop, New York City, announces Madame Helena Rubinstein.

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**Determination of Group Properties in Hair.** Jaromír Tesář (Ústav pro soudní lékařství, Prague). *Časopis Lékarů Českých* 93, 1078-80(1954).—Hair is defatted and thoroughly pulverized either in a ball mill or by grinding with glass powder. The powder is extd. with NaCl soln. of 1 hr at 100°; the supernatant is used for the absorption of high-titer agglutinins, indicated by the drop of erythrocyte agglutination titer. The fall to at least  $\frac{1}{8}$  the original titer shows the presence of the respective blood group in the hair. Forensic applications are discussed. *Thru C. A. 49, 786a*

**Cleaning or Tarnished Metal Surfaces.** Württembergische Metallwaren fabrik. *Ger.* 825,027, Dec. 17, 1951 (Cl. 48a, I<sub>03</sub>). The metal (noble metal, Cu, brass, etc.) (I) surface to be cleaned is treated with a powd. metal below I in the electromotive series (preferably Zn dust) in the presence of an electrolyte. The metal powder can be mixed with the salt or the crystd. acid. The mixt. (II) is, for use, moistened and spread by rubbing on the I surface. Alternatively a suitable carrier material (wadding or textile fabric) is impregnated with II and after moistening, used as cleaning material. Cleaning can also be accomplished by dipping the I surface in a bath prepd. by suspending the mixt. of metal dust and salt or crystd. acid in a dil. acid or salt soln. Suitable compns. are: 60% oxalic acid and 40% Zn dust 40 and 50% NH<sub>4</sub>Cl and 50% Zn dust. *Thru C. A. 49, 827e*

**Antioxidants for Fats and Oils.** Alan Bell and M. B. Knowles (to Eastman Kodak Co.). U.S. 2,688,625, Sept. 7, 1954. 2,2'-Alkylidenebis(4-alkoxy-6-vinylphenols) (I) and their derivs. are good antioxidants for the stabilization of fats and oils, are sol. in them, have good carry-over properties, and are stable to heat. Several new I and intermediates are prepd. *Thru C. A. 49, 1239h*

**The Swelling and Softening of Human Hair in Ammonium Thioglycolate Solution.** R. Heilingotter. *Seifen-Öle-Fette-Wachse* 80, 669-71(1954).—The swelling of human hair in NH<sub>4</sub> thioglycolate soln. (pH 9.7) is measured

under the microscope or by detg. the wt. increase after centrifuging. The percentage swelling decreases with decreasing pH of the soln. and is somewhat lowered by various addns. (wetting agents, inorg. salts, especially Na<sub>2</sub>SO<sub>3</sub>). The softening is measured by the percentage elongation with time of a hair of detd. length (calcd. to a standard cross section) immersed in NH<sub>4</sub> thioglycolate soln. contg. 5.4% thioglycolic acid. Solns. of lower pH or contg. various addns. decrease softening to a lesser extent than they do swelling. *Thru C. A. 49, 4946f*

**Action of Squalene Upon Carcinogenic Hydrocarbons.** H. Sobel and Jessie Marmorston (Institute for Medical Research, Cedars of Lebanon Hospital, Los Angeles 29, Calif.) *Nature* 174, 553-54(1954). Only 7 per cent of 7,12-dimethylbenz(a) anthracene could be recovered after exposure to squalene for one week at 37° C. Nothing could be recovered after the second week. In the case of 3-methylcholanthrene 30 per cent remained after the first week and only traces were found afterwards. *Thru J. Am. Oil Chemists' Society*, 32, No. 1 p. 45.

**Identification of the Isomeric Phenylenediamines.** Frank J. Welcher (Indiana Univ., Bloomington). *Proc. Indiana Acad. Sci.* 63, 110-12(1953); cf. Thiele and Steimmig, *C.A. I*, 1415.—A simple procedure for the identification of the 3 isomeric phenylenediamines is described. The acetylacetone test consists in placing a few crystals of the diamine to be tested on a spot plate and adding 0.2 ml. H<sub>2</sub>O, 1 drop bN HCl, and 2 drops 1% aq. acetylacetone soln. o-Phenylenediamine (I) gave a purple colored soln.; the m-phenylenediamine (II) and p-phenylenediamine (III) gave no color reaction. The La Rosa test consists in placing a few crystals of the diamine on a spot plate and adding 0.2 ml. H<sub>2</sub>O, 1 drop 6N HCl, 1 drop FeCl<sub>3</sub> soln. (0.25 mg./ml.), 3 drops 6N KOH, and 2 drops Mg(NO<sub>3</sub>)<sub>2</sub> soln. (100 mg./ml.). I gave a pale greenish yellow ppt., II a pale yellow-orange ppt., and III a deep violet ppt. The Lauth test consists in placing a few crystals of the diamine on a spot plate and adding 0.2 ml. H<sub>2</sub>O, 1 drop 6 N HCl, 0.2 ml. satd.

aq. soln. H<sub>2</sub>S, and 1 drop FeCl<sub>3</sub> soln. (2.5 mg./ml.). I gave a brownish red soln., II a yellow soln., and III a deep violet-blue soln. *Thru C. A. 49, 101f*

**The Fate of p-Hydroxybenzoate Esters in the Human Body.** Th. Sabalitschka and Ruth Neufeld-Crzellitzer (Biol. Chem. Forschungsanstalt, Berlin). *Arzneimittel-Forsch.* 4, 575-9(1954).—Propyl (I) and benzyl p-hydroxybenzoate (II) were given in daily doses of 2 g. orally to human subjects for several days. No I was found in the urine but sulfate derivs. and free p-hydroxybenzoic acid (III) were found up to 17.5% besides small amts. of p-hydroxyhippuric acid (IV). Feeding of II caused 6% of it excreted unchanged in the urine besides the same products as in the case of I. The following compds. were synthesized: IV, m. 238° (decompn.); the CH<sub>3</sub>O deriv. of IV, from anisoyl chloride and glycine, m. 171°. II, m. 114°. *Thru C. A. 49, 518i*

**Theoretical and Practical Results of Studies on the Effect of Thioglycolic Acid and 3-Mercapto-1,2-Propanediol on Human Hair.** R. Richter and W. Fuhrman (Dermatol. Clinic, Ankara, Turkey). *Arch. Dermatol. u. Syphilis.* 198, 274-93(1954).—Human hair was tested in soln. under tension. 3-Mercapto-1,2-propanediol alkalinized with monoethanolamine has better curling properties than thioglycolic acid in monoethanolamine. Cutaneous patch tests are not reliable in judging irritation from permanent-wave solns. Toxic reactions to thioglycerol alkalinized with monoethanolamine are unknown. *Thru C. A. 49, 565c*

**The Carcinogenic Activity of Purified Cholesterol.** I. Hieger and S. F. D. Orr (Roy. Cancer Hosp., London). *Brit. J. Cancer* 8, 274-90(1954).—Com. cholesterol was purified by acetylation, bromination and chromatography to give a product with a very low ultraviolet absorption. Five mice of 172 mice injected repeatedly with this material in olive oil developed sarcomas. In controls injected with oil alone 1 of 134 mice developed a sarcoma. Stock mice were twice as sensitive as C<sub>37</sub> mice to carcinogenesis by com. cholesterol. The cholesterol-induced sarcomas had a long latent period, averaging 19 months. *Thru C. A. 49, 1198b*

**Application of Solubilization to Pharmacy. V. Solubilization of Non-steroidal Estrogen.** Toshio Nakagawa. *J. Pharm. Soc. Japan* 74, 1116-19(1954); cf. C.A. 48, 12374g.—The soly. of dienestrol, hexestrol, diethylstilbestrol and their ester- and ether-type derivs. was detd. in aq. solns. of various surfactants, e.g. polyoxyethylene sorbitan monolaurate, polyoxyethylene monododecyl ether, polyoxyethylene monolaurate, dodecylpyridium chloride, dodecyltrimethylammonium chloride, Na dodecyl sulfate. Some of the estrogens with a free OH group were very sol., while those with all the hydroxyls substituted were less sol. *Thru C. A.* 49, 2033b

**Oxidized Aluminum Sheets for Adsorption of Cosmetics or Drugs.** Geronimo Raineri. *Ital.* 480,306, Apr. 28, 1953. Oxidized Al sheets for adsorption of cosmetics or drug preps. for therapeutic purposes are produced by electro-chem. oxidation in aq. bath of 18%  $H_2SO_4$  and 9% glycerol at 15-20 amp./sq.dm., 20-40 v., and 20-30°; or by chem. oxidation in aq. 10% NaOH at 60°, followed by treatment with 50%  $HNO_3$ . *Thru C. A.* 49, 2038d

**Determination of Zinc Oxide in Calamine Lotion.** M. Pernarowski and L. G. Chatten (*Drug Standards*, 1954,

22 9-10, 181-184).—Measure 10 ml of calamine lotion in a 10-ml calibrated flask and transfer it completely with water to a filter-paper on a Buchner funnel. Wash the residue with water and transfer the filter-paper with the residue to a beaker. Add 50 ml of N  $H_2SO_4$  soln. warm for a few min. and stir until no further solution occurs. Filter and wash the residue with hot water until the washings are neutral to litmus. Cool and make up to 250 ml with water. To a 50-ml aliquot, add 1.5 g of  $NH_4Cl$  and titrate with N NaOH, with methyl orange as indicator. *Thru Analytical Abstracts*, 2, 458

**Skin Sterols. V. Effect of Ultraviolet Light on the Sterols of Rat Skin.** W. W. Wells and C. A. Baumann (Univ. of Wisconsin, Madison). *Arch. Biochem. and Biophys.* 53, 471-8(1954); cf. C.A. 49, 3350e.—Most of the  $\Delta^7$ -cholesterol in normal rat skin is located in the epidermis; nearly all is esterified. Of the cholesterol in the epidermis, 63% is esterified and that in the dermis is mostly free. On exposure of rats to ultraviolet light, the concns. of both sterols increased in the dorsal skin; the increases were approx. proportional to the degree of irradiation for the 1st 28 days of exposure. During recover, the amts. of both sterols decreased at about the same rate. Ir-

radiation also increased the concn. of 7-dehydrocholesterol in skin but this sterol never accounted for more than 2% of the total sterols present. *Thru C. A.* 49, 4845b

**The Neutralization of Alkali by the Skin.** D. J. H. Vermeer, J. C. de Jong, and J. B. Lenstra (Univ. Amsterdam). *Dermatologica* 108, 88-98(1954).—The ability of the skin to neutralize alkali was studied with 0.025, 0.05, and 0.1N soln. of NaOH contg. 0.02% thymolphthalein. The time required for decolorization of a droplet placed on the external surface of the forearm is recorded. Three different types of response are distinguished: (1) where the time required for the solns. is 1:2:4 (normal); (2) where the ratio is approx. 1:2:1 (patients with alkali eczema); and (3) an intermediate type (common in patients having an alk. eczema). The role of amino acids, skin fatty acids, etc., in these patterns is discussed. *Thru C. A.* 49, 4860f

**An Antibiotic from Pseudomonas.** S.H.F. Chinn (Science Service, Saskatoon, Saskatchewan). *Can. J. Microbiol.* 1, 118-24(1954).—A culture tentatively identified as *Pseudomonas viscosa* produced antibiotic-like effects when used to inhibit gram-pos. and gram-neg. bacterial and some fungi in cross-streak agar tests. *Thru C. A.* 49, 429e



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**Detection of Vegetable Fats and Oils by the Phytosterol Acetate Test.** H. Hadorn and R. Jungkunz (Lab. VSK, Basel, Switz.). *Mitt. Lebensm. Hyg.* 45, 389-96(1954).—A modification of the phytosterol test is described. The material to be tested is sapond., and the unsapond. is isolated with Et ether. The sterols are pptd. with digitonin, and the resulting sterol digitonides are recrystd. from Ac<sub>2</sub>O to yield cryst. sterol acetates. A m.p. of sterol acetates above 117° indicates the presence of vegetable fats or oils. *Thru C. A. 49, 5002i*

**Separation of Fatty Acids of Different Molecular Weight by Means of Addition Compounds with Urea.** Rolando Rigamonti and Virginio Riccio. *Ann. chim. (Rome)* 44, 288-98(1954); cf. C.A. 47, 8391i.—Treating solns. of mixed fatty acids in light benzene with solid urea in a satd. water soln. yields addn. products whose equil. const. of the reaction differs with the mol. wt. of the acids. By using this complexing technique in a manner similar to fractional crystn., fatty acids of 90% purity can be isolated. *Thru C. A. 49, 5003e*

**Hair Dyes and Bleaches.** José Soriano Ribera. *Span.* 207,526, May 5, 1953. The injurious effects of hair

bleaches and dyes are alleviated by adding a mixt. prepd. as in the following example: Each of the following compds. is mixed separately with 0.1 part liquid vaseline (I) and 0.004 part glyceryl stearate (II), resp.: hexadecyl alc. 0.020, lecithin 0.002, cholesterol 0.002, cystine 0.002 and alkyl sulfate 0.001 part by wt. The 2 mixts. are thoroughly mixed and used with liquid bleach or dye in a 1-5 ration. *Thru C. A. 49, 574f*

**Determination of Free, Ester, and Total Cholesterol Without Saponification.** S. L. Kanter, J. R. Goodman and Jane Yarborough (Brentwood Neuropsych. Hosp. Veterans Admin. Center, Los Angeles, Calif.). *J. Lab. Clin. Med.* 40, 303-12(1952). A rapid and accurate method for the determination of total, ester and free cholesterol is described. Temperature control and individual timing is eliminated by using a filter of 540 mμ to measure and developed color. The use of cholesterol acetate as a reference standard eliminates saponification. (C. A. 48, 11635) *Thru J. AM. Oil Chemists' Society*, 32, 1, 44.

**Corrosion Inhibitor of Metals in Acids.** Matsutaro Kano and Shigeru Kishima (to Sumitomo Chemical Industries Co.). Japan 2413('54), May 4. Corrosion of soft steel by HCl is prevented by the addn. of 0.05-0.1% acetylenic

alc., e.g. CH: CCH<sub>2</sub>OH or butynediol. *Thru C. A. 49, 1529e*

**Volatile Plant Substances.** Yves Rene Naves (L. Givaudan & Cie, Vernier-Geneva, Switz.). *Bull. soc. chim. France* 1954, 321-9; cf. C. A. 48, 9978f

**The Essential Oil of Cyperus Scaeosius R. BR.** IBID. 332-4.—The essential oil of *Cyperus scaeosius*, d<sub>20</sub> 0.9679, n<sub>D</sub><sup>20</sup> 1.5100, a<sub>D</sub> -7°8', contains 40% of tricyclic sesquiterpenes and 33% of bicyclic sesquiterpene ketones. The main ketonic fraction, treated with Girard P reagent (I) gives the dl-acyperone. The other fraction (not treated with I) contains another ketone (II). Hydrogenation of II gives a new ketone; 2,4-dinitrophenylhydrazone, m. 195-6°. The infrared and ultraviolet spectra of these compds. are described.

**CXXX. Presence of Lanceol in the Essential Oil of Sandalwood Kenya (Osyris Tenuifolia).** IBID. 334-7.—The essential oil of *Osyris tenuifolia* contains: some bisabolene, some cadinene, 24% of laevorotatory sesquiterpenic alcs., and 45% of lanceol. Hydrogenation of III gives bisabolane and hexahydrolanceol. The infrared spectra of these compds. are described. *Thru C. A. 49, 237d*

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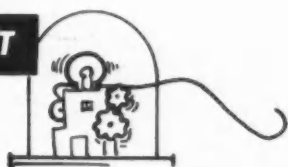
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## MARKET REPORT



### Price Trend in Raw Materials Highly Mixed . . .

THE price trend in raw materials was highly mixed over the final month of last year. Citric acid, citrates and tartrates scored advances of from one to three cents a pound while a rather extended list of essential oils and some of the aromatic chemicals suffered de-

clines. Safrol bearing oils, clove, bois de rose, and sandalwood were among the oils registering losses. The downward trend in oils was attributed to more favorable shipping prices from primary centers or freer offerings rather than by any selling pressure by dealers.

costs, quotations were advanced on citrates from one to four cents a pound. Sodium citrate USP, and ammonium citrate were each moved up a full cent a pound. Tartaric acid scored a rise of three cents a pound and cream of tartar 2½ cents. The demand for citric and tartaric acids has been running into considerable volume reflecting the high rate of activity in the beverage trade as well as the development of newer products in the food industry.

### PRICE CHANGES

#### ADVANCES

Carnauba wax, No. 1, yellow  
Alcohol, gal.—  
190 proof, tax free, carlots  
200 proof, tax free, carlots  
Menthol, Japanese  
Palm oil, drums, N. Y.  
Tartaric acid, 100 lb. drums  
Cream tartar, 100 lb. drums, fwd.  
Citric acid, anhyd., 100 lb. drums

#### CURRENT

\$1.10  
\*0.55  
\*0.60  
\$8.75  
0.13¼  
0.49  
0.40  
0.32½

#### PREVIOUS

\$1.08  
0.53  
0.58  
\$8.50  
0.13  
0.46  
0.38  
0.31¼

#### DECLINES

Grease, white  
Cocoa butter  
Oil bois de rose (rosewood) Brazilian  
Oil patchouli  
Oil wormseed  
Menthol, Brazilian  
Oil sandalwood  
Oil ocotea cymbarum  
Glycerine, crude—  
Soap lye  
Saponification  
Oil sassafras, artificial

0.08¼  
0.53½  
\$4.00  
\$7.60  
\$3.35  
\$7.45  
\$17.50  
0.60  
0.19  
0.21  
0.65  
0.08¾  
0.54½  
\$4.35  
\$7.65  
\$3.40  
\$7.75  
\$18.00  
0.68  
0.20  
0.22  
0.70

\* Effective January 1, 1956.

Prices per pound unless otherwise specified.

#### SAFROL OILS SOFTER—

Safrol bearing oils, namely ocotea cymbarum and artificial camphor lost further ground over the past month. Spot prices hit new lows on the downward trend, ocotea falling to 60 to 65 cents and artificial sassafras to 65 to 70 cents a pound. Since both articles continue in a highly competitive position it is difficult to determine whether the bottom of the decline has been reached.

#### BOIS DE ROSE COMPETITIVE—

Increasing offers of bois de rose from sources other than Brazil caused spot prices to work lower. For many years supplies from Brazil were closely controlled. Be-

cause of the competitive situation buyers appeared to be exceedingly cautious in their operations, buying only such quantities that were actually needed. Spot prices for Brazilian bois de rose dropped to \$4 to \$4.25 per pound with outside lots being available at lower levels.

#### CITRUS OILS ACTIVE—

Demand for citrus oils was active. Orange, lemon, and lime all shared in the activity. Grapefruit also commanded a fair amount of attention. Beverage manufacturers were well represented in the market and takings for the account of confectioners were in good volume.

#### RISE IN CITRATES—

Reflecting generally increased

#### REFINED GLYCERIN UP, CRUDE OFF—

Makers of natural glycerin advanced selling schedules on all refined grades to compensate for the cost of shipping material in non-returnable drums. The advance in refined prices in drums amounted to a full cent a pound. Meanwhile prices for crude material were reduced by a cent a pound. It was the first change to take place in crude prices in some time. Demand for refined glycerin was brisk. There was a rather marked falling off in incoming shipments of crude from the Argentine. Some attributed the drop in arrivals to political developments in that country.

#### PEPPERMINT LOSES GROUND—

Fairly liberal offerings of low test material served to have a general softening affect upon prices for both the natural oil as well as the redistilled material especially in view of a seasonal slackening in demands. Some trade observers are still bullish regarding the longer term outlook.

#### VANILLA BEANS EASE—

Under the influences of greater arrivals from both Madagascar and Mexico, and a seasonal slackening in demands, prices on vanilla beans turned easier toward the close of last month. Incoming shipments from Madagascar followed closely the arrival of a substantial amount from Mexico with an estimated value of \$350,000. The fresh lots were purchased some time ago when bean prices were at around \$10 per pound. Currently Bourbon beans are to be had at prices ranging from \$6.25 to \$6.50 per pound.



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